Nos. 98-1701 and 98-1706

IN THE

Supreme Court of the United States

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Petitioner,

and

UNITED STATES OF AMERICA,
Petitioner,

v.

GARY LOCKE, Governor of the State of Washington, *et al.*,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Ninth Circuit

JOINT APPENDIX

SETH P. WAXMAN
Solicitor General
Department of Justice
Washington, DC 20530-0001
(202) 514-2217
Counsel of Record for Petitioner, United States of America

C. JONATHAN BENNER
ECKERT SEAMANS CHERIN & MELLOTT, LLC
1250 24th Street, N.W.
Suite 700
Washington, DC 20037
(202) 659-6600
Counsel of Record for Petitioner, INTERTANKO

CHRISTINE O. GREGOIRE
Attorney General
P.O. Box 40100
Olympia, WA 98504-0100
(360) 753-6245
Counsel of Record for State Respondents

JEFFREY L. NEEDLE
LAW OFFICES OF JEFFREY L. NEEDLE
119 First Avenue South
Suite 200
Seattle, WA 98104
(206) 447-1560
Counsel of Record for Respondent-Intervenors

Petitions for Writ of Certiorari Filed April 23, 1999
Certiorari Granted September 10, 1999

343 PP

TABLE OF JOINT APPENDIX

Page

Relevant Docket Entries, Ninth Circuit and U.S. District Court (W.D. Wa.) JA-1

Letter of August 25, 1993 from Adm. Henn USCG to Barbara Herman, OMS JA-13

Declaration of Robert Bishop in Support of Plaintiff Intertanko JA-17

Affidavit of Miles Kulukundis is Support of Plaintiff Intertanko JA-25

Declaration of Richard T. Du. Moulin in Support of Plaintiff Intertanko JA-30

Letter of September 15, 1995 from OMS to Chronos Shipping with Notice of Determination JA-35

Letter of June 22, 1995 to Barbara Herman, OMS from Adm. Card USCG JA-39

January 30, 1991 Memorandum from Chief Counsel, USCG to Chief of Staff Re: Review of California Oil Spill Prevention and Response Act JA-42

Affidavit of C. Jonathan Neel (States/British Columbia Oil Spill Task Force) JA-64
Exhibit 38 . . . . . JA-73

Law of the Sea Treaty Provisions JA-82

Affidavit of William B. Collins JA-85

Page

Affidavit of Stanley J. Norman . . . . . JA- 88
Exhibit 11 . . . . . JA-128
Exhibit 15 . . . . . JA-129
Exhibit 27 . . . . . JA-133
Exhibit 33
Exhibit 34

[Note: Exhibits 33 and 34 are oversized exhibits that Respondent has lodged separately with the Court.]

Affidavit of Megan N. Dethier (Shoreline Habitats) . . JA-136

Affidavit of Ronald M. Thom (Coastal Aquatic Vegetated Habitats in Washington State) . . JA-145

Affidavit of Dennis Paulson (Seabirds-Valuable and Vulnerable Resources of Washington's Marine Waters) JA-161

Affidavit of Morris W. Barker JA-173

Affidavit of Susan Zemek JA-180
Exhibit 1 . . . . . JA-182

Affidavit of Richard Kocan JA-191

Affidavit of Ronald F. Teissere JA-200

Affidavit of Arthur McKenzie in Support of Intervenors' Motion for Summary Judgment JA-203

Declaration of Sally Ann Lentz in Support of Motion for Summary Judgment JA-211
Attachment C JA-219
Attachment D JA-223
Attachment E JA-229

Page

Attachments to Declaration of Darin Bartram . . . JA-245

Second Affidavit of Stanley J. Norman JA-253
Exhibit 1 . . . . . JA-264
Exhibit 2 . . . . . JA-266
Exhibit 3 . . . . . JA-292

Declaration of William Bafus with Table "A" . . . JA-295

Attachment to Reply by Plaintiff Intertanko JA-301

Declaration of Jeffrey Needle in Reply to Intervenors' Motion for Summary Judgement JA-304

Attachment A-Report Of Lord Donaldson's Inquiry Into The Prevention Of Pollution From Merchant Shipping JA-306

Letter of September 28, 1993 From the Washington State Congressional Delegation to Commandant J. William Kime USCG . . . JA-327

Affidavit of Arthur McKenzie JA-330

The following opinions, decisions, judgments and orders have been omitted in printing this joint appendix because they appear on the following pages in the appendix to the printed Petition for Certiorari:

Order and Amended Opinion Of The United States Court of Appeals For The Ninth Circuit Dated And Filed June 18, 1998 And Amended August 31, 1998 (Appendix A) 1a

Order Of The United States District Court For The Western District Of Washington At Seattle Dated, Entered And Filed November 18, 1996 (Appendix B) 39a

Order Of The United States Court Of Appeals For The Ninth Circuit Dated And Filed November 24, 1998 (Appendix C) 75a

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

97-35010

INTERNATIONAL ASSOCIATION OF
INDEPENDENT TANKER OWNERS;
Plaintiff-Appellant

USA
Intervenor-Appellant

v.

MIKE LOWRY, Governor of the State of WA, et al
Defendants-Appellees

and

NATIONAL NATURAL RESOURCES DEFENSE COUNCIL;
WASHINGTON ENVIRONMENTAL COUNCIL;
OCEAN ADVOCATES INC.
Intervenors-Appellees

RELEVANT DOCKET ENTRIES

DATE	PROCEEDINGS
4/24/97	Filed motion by the United States to intervene; served on 4/23/97 [3218850] (MOATT) [97-35010] (gail)
5/9/97	Received original and 15 copies amicus curiae Int'l Chamber of Shipping's brief of 50-pgs; served on 5/7/97 (mtn to file pending) [97-35010] (gail)

DATE	PROCEEDINGS
5/12/97	Filed original and 15 copies intervenor USA's amicus curiae brief of 56-pgs; served on 5/7/97 [97-35010] (gail)
6/6/97	* * * * The mtn to intervene filed by the US is granted. * * * *
7/1/97	Filed original and 15 copies Appellant's opening brief of 92-pgs and 5 excerpts of record (Informal: no); served on 6/30/97 [97-35010] (gail)
9/3/97	Filed original and 15 copies appellees (Gary Locke, et al.)'s ans brf of 64 pgs + appendix and 5 excerpts of record in 6 vols.; served on 8/25/97 [97-35010] (gail)
9/3/97	Received original and 15 copies intv/aple (National Res Def Cncl, Washington Env Cncl, and Ocean Advocates) brief of 63-pgs (Recvd because brfs are missing proof of service; notified cnsl.) [97-35010] (gail)
2/4/98	ARGUED AND SUBMITTED TO James R. BROWNING, served on 7/31/98 (PANEL AND ALL ACTIVE JUDGES) [97-35010] (gail)

DATE	PROCEEDINGS
8/31/98	Filed order and amended opinion. The panel's opinion, filed on 6/18/98, is amended as follows: (For Complete Text See Order) (FAXED TO CSL AT 2:32 P.M.) (Judges James R. BROWNING, Diarmuid F. O'SCANNLAIN, Alfredo C. Marquez,) (Orig. opinion id: [3472982-1]) [97-35010] (gail)
8/31/98	[3499649] Filed original and 40 copies aplt Intl Assoc of Indep petition for rehearing with suggestion for rehearing en banc 20 p.pages, served on 8/31/98 (PANEL AND ALL ACTIVE JUDGES) [97-35010] (gail)
11/24/98	Filed order (James R. Browning, Diarmuid F. O'SCANNLAIN, Alfredo C. Marquez): The panel has unanimously voted to deny the pet for rhrg. Judge Browning and Judge O'Scannlain have voted to reject the sugg for rhrg en banc, and Judge Marquez so recommends. The full ct was advised of the suggs for rhrg en banc. An active judge requested a vote on whether to rehear the matter en banc. The matter failed to receive a majority of the votes of the nonrecused judges in favor of en banc consideration. FRAP 35. The pets for rhrg are DENIED and the suggs for rhrg en banc are REJECTED. (Judge Graber's dissent to denial of pet for rhrg included) (See Order for Full Text.) [3499345-1] [97-35010] (gail)

DATE	PROCEEDINGS
12/2/98	MANDATE ISSUED [97-35010] (jr)
3/18/99	Received letter from the Supreme Court dated 3/15/99 re: ext of time to file pet for writ of cert has been extended to 4/23/99 (Casefile) [97-35010] (gail)

UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF WASHINGTON

2:95cv1096

INTERTANKO, *et al.*

v.

LOWRY, *et al.*

RELEVANT DOCKET ENTRIES

DATE	NO.	PROCEEDINGS
7/17/95	1	COMPLAINT of Intertanko for declaratory relief and permanent injunction against the enforcement of certain statutes and regulations of the State of WA purporting to regulate operations, manning, and equipment of tank vessels in interstate and international commerce (Summons(es) issued) Receipt # 223757 (gm) [Entry date 07/28/95]
9/19/95	12	ANSWER to complaint [1-1] by defendant Mike Lowry, defendant Christine O Gregoire, defendant Barbara J Herman (gm) [Entry date 09/22/95]
1/25/96	--	PROPOSED Intervenor's Answer by defts Natural Resources Defense Council & WA Environmental Council (gm) [Entry date 01/31/96]

DATE	NO.	PROCEEDINGS
1/25/96	27	ANSWER to complaint filed by Intervening Defts Natural Resources Defense Council & WA Environmental Council [1-1] (gm) [Entry date 01/31/96]
6/3/96	87	MOTION by State defendants for partial summary jgmnt; O.A. REQ'D NOTED FOR 7/19/96 (JOINT APPENDIX FILED IN EXPANDOS) (gm) [Entry date 06/04/96] [Edit date 06/05/96]
6/3/96	89	MEMORANDUM by defendants in support of motion for partial summary jgmnt [87-1] (gm) [Entry date 06/04/96]
6/3/96	102	MOTION by intervenor National Resources, intervenor WA Environ Coun, intervenor Ocean Advocates Inc for summary jgmnt; O.A. REQ'D NOTED FOR 7/19/96 (gm) [Entry date 06/04/96]
6/3/96	103	MEMORANDUM by intervenor in support of motion for summary jgmnt [102-1] (gm) [Entry date 06/04/96]
6/3/96	105	MOTION by plaintiff Intertanko for summary jgmnt; O.A. REQ'D NOTED FOR 7/19/96 (gm) [Entry date 06/04/96]

DATE	NO.	PROCEEDINGS
6/3/96	106	MEMORANDUM by plaintiff Intertanko in support of motion for summary jgmnt [105-1] (FILED IN EXPANDO) (gm) [Entry date 06/04/96] [Edit date 06/05/96]
6/3/96	107	APPENDIX VOLUME I thru IV filed by plaintiff Intertanko re motion for summary jgmnt [105-1] (FILED IN EXPANDOS) (gm) [Entry date 06/04/96]
7/2/96	113	OPPOSTION (RESPONSE) by defendant James H. Krider to motion for summary jgmnt AND JOINDER of "State Defts" OPPOSITION TO Summary Judgment [105-1] (gm) [Entry date 07/03/96]
7/3/96	116	MEMORANDUM OF POINTS AND AUTHORITIES IN RESPONSE by plaintiff Intertanko to motion for summary jgmnt [102-1] (FILED IN EXPANDO) (gm) [Edit date 07/08/96]
7/3/96	117	MEMORANDUM IN OPPOSITION (RESPONSE) by plaintiff Intertanko to motion for summary judgment [99-1] (FILED IN EXPANDO) (gm) [Edit date 07/08/96]

DATE	NO.	PROCEEDINGS
7/3/96	118	MEMORANDUM OF POINTS AND AUTHORITIES IN RESPONSE by plaintiff Intertanko to motion for partial summary jgmnt [87-1] (FILED IN EXPANDO) (gm) [Edit date 07/08/96]
7/3/96	119	RESPONSE by intervenor to motion for summary jgmnt [105-1] (gm) [Entry date 07/08/96]
7/3/96	121	RESPONSE by State defendants to motion for summary jgmnt; [105-1] (gm) [Entry date 07/08/96]
7/15/96	131	REPLY by plaintiff Intertanko TO Intervenors RESPONSE to motion for summary jgmnt [105-1] (FILED IN EXPANDO) (gm) [Entry date 07/17/96] [Edit date 07/17/96]
7/15/96	132	REPLY by plaintiff Intertanko TO State Defts RESPONSE to motion for summary jgmnt [105-1] (FILED IN EXPANDO) (gm) [Entry date 07/17/96]
7/15/96	134	REPLY by State Defts TO pltf Intertanko's RESPONSE to motion for partial summary jgmnt [87-1] (gm) [Entry date 07/17/96]

DATE	NO.	PROCEEDINGS
7/15/96	136	REPLY MEMORANDUM by intervenor IN SUPPORT OF motion for summary jgmnt [102-1] (gm) [Entry date 07/17/96]
9/24/96	147	MOTION by intervenor WA Environ Coun to supplement the summary judgment record NOTED FOR 10/11/96 (gm) [Entry date 09/25/96]
9/24/96	148	MEMORANDUM by intervenor WA Environ Coun in support of motion to supplement the summary judgment record [147-1] (gm) [Entry date 09/25/96]
9/24/96	150	SUPPLEMENTAL DOCUMENTS in support of AND IN OPPOSITION to Summary Judgment by intervenor WA Environ Coun to [105-1] (gm) [Entry date 09/25/96]
9/27/96	154	RESPONSE by plaintiff Intertanko to motion to supplement the summary judgment record [147-1] (gm) [Entry date 09/30/96]

DATE	NO.	PROCEEDINGS
9/30/96	156	MINUTE ORDER: by direction of Judge John C. Coughenour GRANTING Intervenors motion to shorten time and accompanying motion to supplement the summary judgment record with additional documents. The documents submitted by intervenors and the documents submitted by pltf with its response to intervenors' motion to supplement are hereby added to the summary judgment record. [147-1] [151-1], (cc: counsel, Judge) (gm)
10/7/96	157	STATEMENT OF ADDITIONAL AUTHORITIES by state defendants (Attachment) (kerr)
10/9/96	159	MINUTES OF ARGUMENT: JCC; Dep. Clerk: Julie Mahnke; CR: Stanley-Knight (Flygare); Attys present Henry Jameson, Jonathan Benner, William Collins, Jeff Needle, Sean Connaughton; cnsl heard. Ct will issue a written decision. (rs) [Entry date 10/10/96]
10/22/96	160	MOTION by plaintiff Intertanko to supplement the record on summary judgment NOTED FOR 11/8/96 (gm) [Entry date 10/23/96]

DATE	NO.	PROCEEDINGS
10/22/96	161	MEMORANDUM by plaintiff Intertanko in support of motion to supplement the record on summary judgment [160-1] (gm) [Entry date 10/23/96]
11/1/96	166	RESPONSE by defendant Mike Lowry, defendant Christine O Gregoire etc to motion to supplement the record on summary judgment [160-1] (dm) [Entry date 11/04/96]
11/18/96	179	ORDER by Judge John C. Coughenour GRANTING pltf's motion to supplement the record on summary judgment [160-1], DENYING dft Krider's motion for summary jgmnt; [105-1] GRANTING dft's & intervenor's motion for summary jgmnt; [102-1] DENYING pltf's motion for summary judgment [99-1], GRANTING dft's motion for partial summary jgmnt; [87-1] This action is hereby DISMISSED and the Clerk of the Court is directed to enter judgment accordingly. Case terminated. (cc: counsel, Judge, JM) (dm)

DATE	NO.	PROCEEDINGS
11/20/96	180	JUDGMENT: by court the motions for summary jgm filed by dfts and intervenors are GRANTED and the motion for summary jgm filed by Intertanko is DENIED. This action is DISMISSED (cc: counsel, Judge, Jgm. Book) Entered on 11/20/96 (rs)
12/11/96	182	NOTICE OF APPEAL by plaintiff Intertanko form Dist. Court decision [179-2, 180] (cc: CCA, JCC, Counsel) (lb) [Entry date 12/14/96]

U.S. Department of Transportation

United States Coast Guard

AUG 25 1993

Ms. Barbara Herman
Administrator
State of Washington
Office of Marine Safety
711 State Ave., NE
Olympia, WA 98504-2407

Dear Ms. Herman:

In previous recent correspondence, I advised you of my concern regarding the application of certain provisions of Washington State law and their application to Canada-bound vessels transiting the Strait of Juan de Fuca. My concern focuses on some actions that may be taken by your office that jeopardize existing or future international treaties and agreements, each of which may be more beneficial overall in protecting the environment. I hope that we can come to a workable solution among all three governments to resolve what I see as a near term conflict between the application of some very important and essentially sound state regulations and longstanding international agreements.

As a legal matter, I would call your attention to the 1979 Canada-United States Agreement for a Cooperative Vessel Traffic Management System for the Juan de Fuca Region. Under that Agreement, the Parties have recognized the desirability of compatibility in their respective national regulations bearing on marine safety and environmental protection applicable to vessels using the cooperative vessel traffic management system (CVTMS). Specifically, Canada and the United States have agreed that –

> In applying its regulations to vessels proceeding through its portion of the applicable waters solely en route to or departing from a port of the other Party, will consider compliance with the requirements of the other Party to be effectively equivalent to material compliance with its own requirements, so long as the requirements and enforcement practices of the other Party, in their totality, continue to provide a comparable degree of marine safety and environmental protection.

It is the Coast Guard's opinion that the application of Washington State's regulations regarding vessel oil spill prevention plans to vessels utilizing the (CVTMS) solely en route to or departing from Canada would contravene the 1979 Agreement. As a consequence, such an application would be voided by the Supremacy Clause of the United States Constitution.

While the Coast Guard has a number of authorities, including 33 U.S.C. 1230, which it might exercise in this situation, we would hope to be able to work with your Office during the course of our discussions with the Canadians on the question of appropriate standards and requirements in waters of mutual interest. We understand, in this connection that your Office has authority under the applicable statute and regulations to waive regulation application where there is a legal basis for the waiver. We suggest that the Coast Guard opinion referred to above would provide the legal basis for such a waiver. Certainly such a waiver would assist in avoiding misunderstandings as to the applicability of the State's requirements in contravention of the Agreement, and improve the atmosphere for my discussions with Canada.

You and I share similar goals to act swiftly to protect our waters. To do this, we must work cooperatively with those

who share our waters. Therefore, it is essential that we work carefully and through diplomatic channels. Sometimes this is a slow, deliberate process - but it works. Indeed, we have several initiatives in progress similar to your pollution prevention plans. These include:

1. The proposed "International Management Code for the Safe Operation of Ships and for Pollution Prevention," enclosure (1).

2. Through the International Maritime Organization (IMO) Subcommittee on the Standards of Training and Watchkeeping (STW), we are working on a number of issues for revision to the Standards of Training, Crewing and Watchkeeping (STCW) convention including:

   a. Training and operating procedures for all personnel involved in the operation or navigation of tank vessels;

   b. Human elements such as fatigue and workhour limits;

   c. Proficiency in the English language;

   d. Mandatory vessel reporting schemes;

   e. Simulator training; and

   f. Port-State controls.

We invite you to participate in this and like efforts by attending the SOLAS Working Group on Training and Watchkeeping which is scheduled to meet at the Department of Transportation Headquarters in Washington D.C., on October 14, 1993. We have taken the liberty of adding you to our mailing list; so a package describing the meeting and an agenda will be sent to you in advance.

My staff has advised me that you are interested in working with us to promote Washington State concerns both nationally and internationally. Please find enclosed background information on our work with IMO as well as our national advisory committees. I encourage you to participate in and use these fora and the processes to vet Washington issues to a broader community.

I hope we can resolve these issues soon.

Sincerely,

/s/ A.E. Henn

A.E. Henn
Rear Admiral, U.S. Coast Guard
Chief, Office of Marine Safety,
Security and Environmental Protection

Enclosure

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

No. C95-1096C

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
Plaintiff,

vs.

MIKE LOWRY, Governor of the State of Washington, et al.,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL, et al.,
Intervenors.

DECLARATION OF ROBERT BISHOP IN SUPPORT OF PLAINTIFF INTERTANKO

I, Robert Macnair Bishop, declare as follows:

1. I am an employee of INTERTANKO in the capacity of Manager of the Marine & Environment Section. I am at least 18 years of age and am competent to testify on the matters herein, and make this Declaration based on my current personal knowledge, experience, and belief.

2. I am a citizen of the United Kingdom, hold a Master's mariner's certificate and have extensive ship-board experience on a wide variety of vessels, including Dry Cargo Ships, Bulk Carriers, Container Ships and Tankers.

3. In my capacity as Manager of the Marine & Environment Section I regularly represent INTERTANKO at the International Maritime Organization and other fora. I provide information to Members on international legislation affecting tankers, charterers' vetting inspections and Port State Control, and write the monthly Tanker Safety Circular letter. I am currently engaged in providing research into the safe carriage of oil by sea and the ISM Code.

4. I have reviewed a document entitled the Second Affidavit of Stanley J. Norman and have the following comments.

5. The Second Affidavit of Stanley J. Norman contains a number of mis-statements of fact which should be clarified:

a. On page 5, line 22-23, Mr. Norman mistakenly tries to limit the definition of "fleet" in the BAP Regulations to only those vessels that operate in Washington waters. This is incorrect for a number of reasons.

(1) It is impossible and unrealistic for an owner to determine in advance and segregate for compliance purposes, the vessels in his fleet which will be trading to Washington State on account of the nature of the spot market for oil transportation. Cargoes of oil are oftentimes sold after loading on a vessel with a consequent change in the routing of the vessel. As a result, a tanker owner cannot rationally designate only a portion of his entire fleet of vessels as "Washington eligible" and ensure compliance with BAP Regulations for only those vessels. In order to ensure that any vessel in his fleet is capable of responding to any spot demand for a vessel, owners trading to the West Coast of North America will be obligated to comply with the BAP Regulations even

if a particular vessel is not scheduled to call at Washington.

(2) Mr. Norman Himself states the "the intent is to have a universal system for a fleet of vessels to allow owners and operators the flexibility to move trained personnel between vessel without having to retrain them in the three primary functions, navigation, collision avoidance, and administration, for each vessel on which they embark." (Second Norman Affidavit p.61, 1-4). From a safety and efficiency viewpoint (endorsed by Mr. Norman) it is also essential that every vessel in a fleet maintain uniform training and operating procedures. Therefore, Mr. Norman's assertions on page 5 that a fleet owner is only required to adopt Washington's regulations for a portion of his fleet directly contradict his stated desire for uniform procedures on page 6. The Washington standards for any owner who has any expectation of either calling in Washington, or even for owners merely transiting Washington State waters en route to Oregon or Canada, thus become a minimum requirement or lowest common denominator that applies to all of his fleet throughout the world.

b. On page 5, lines 4 through 12, Mr. Norman asserts that WAC 317-21-130, which requires owners and operators of tank vessels which come into Washington waters to report events anywhere in the world, is intended only to collect information and will not be used against a tank vessel owner. Rather, according to Mr. Norman, the information will be used to measure the effectiveness of prevention measures used by the tanker owners in response to events in other areas of the world.

Whatever the use of the data, if a tanker owner fails to comply with this requirement, OMS will (or could) deny entry of a vessel into Washington.

c. On page 5, line 13-14, Mr. Norman asserts that WAC 317-21-130 is consistent with current efforts in the International Maritime Organization ("IMO") to establish reporting requirements. This is not correct. IMO is currently concerned only with accident reporting not inspection or near miss reporting as required by the BAP Regulations. Consequently, a tanker owner would be required by this regulation either to change its reporting procedure for its entire fleet, including those vessels not scheduled to call the State of Washington or to establish a separate reporting protocol for those vessels which may be routed to the State of Washington. Of course, it is impossible to predict with any great certainty which vessels are likely to be routed to any particular port.

d. WAC 317-21-200(2) requires creation of a standardized bridge resource management system for all vessels in a company's fleet. Mr. Norman asserts that these rules only apply to "those vessels that may operate in Washington waters" but also states that the "intent is to have a universal system for a fleet of vessels to allow owners and operators the flexibility to move trained personnel between vessels without having to retrain them" Second Norman Affidavit p.5-6. As is set out above, conditions of the global spot market for oil, which demands that owners have all vessels ready to load oil for delivery to destinations throughout the world, including the State of Washington, do not permit neat segregation of assets by ultimate destination. Therefore, in order for a fleet owner to meet the State of Washington's intent of having the flexibility of trained personnel adequate to

meet any specific state of national requirements, a tanker owner would have to apply Washington's bridge resource management system throughout its entire fleet, whether or not the tanker owner had plans to have a specific vessel call at Washington.

e. A tanker owner will have to apply Washington's regulations regarding crew training, drill programs, record keeping, and management programs across the board throughout its entire fleet whether or not an individual vessel is scheduled to call the State of Washington. The State of Washington's goals of strict international uniformity in the "three primary functions, navigation, collision avoidance, and administration" (Second Affidavit of Stanley J. Norman, p. 6) can only be met by the adoption of the State of Washington's procedures to its operations around the world.

f. As to WAC-317-21-230, which requires implementation of crew training and drill programs, Mr. Norman asserts that "all training and drills can be accomplished within Washington." Second Norman Affidavit, p. 6, 1 10. This statement is, at best, unrealistic. In the first instance, it presupposes that OMS would permit a vessel to enter Washington waters without first having conducted training and drills and then, only after the vessel enters those waters, conduct training drills. This is simply not credible. Further, and more importantly, under the ISM Code, a company will be required to have training programs in line with international requirements and recommendations. Where those drills are at variance to the drills and training programs set out in WAC-317-21-230, there is a subsequent lack of uniformity which defeats the singular purpose of having drills in the first instance - a

uniformed, pre-conditioned response to a given set of emergency conditions. Finally, approaches and departures from ports are the busiest, and potentially most hazardous parts of a voyage. For Mr. Norman to suggest that training and drills could take place during this time is again unrealistic and without doubt a hazard to the environment and safety of the vessel.

g. As to WAC-317-21-260, which requires management systems, it would be unrealistic to expect that a vessel would incorporate the type of systems and procedures required by this BAP Regulation solely while in Washington waters. No INTERTANKO member is headquartered in Washington State. Any management requirements must by its nature be conducted out of state.

h. Mr. Norman attempts to minimize the incongruities between the State of Washington's regulations and international regulations when he states that "Washington hopes that all the BAP standards will eventually be incorporated into international law and therefore the only expense incurred would be to produce and submit a prevention plan." Second Norman Affidavit, page 8 line 11. Mr. Norman's unsubstantiated hopes for the future do not effect of the immediate and substantial impact of the BAP Regulations on current tanker operations.

i. Similarly, Mr. Norman attempts to minimize the cost of compliance. Second Norman Affidavit, p. 7-8. As to the cost of compliance with the BAP Regulations, INTERTANKO asserts that each vessel in its fleet, for the reasons set out above, whether it has immediate plans to call the State of Washington or not, will incur substantial compliance costs even for vessels not scheduled to call at Washington ports. The BAP Regulations also create managerial, administrative, and

personnel costs that are not dependent on port calls in Washington.

j. Mr. Norman mistakenly states that "the U.S. Coast Guard has no mechanism like prevention plans for evaluating compliance of Foreign Flag vessels with management practices and personnel policies." p. 8 line 14-15. The certifications required by various international conventions are precisely for the purpose of enforcing compliance. The Coast Guard checking these certificates is no less valid a way of evaluating a vessel's management and personnel policy as than are Washington's BAP plans.

k. Mr. Norman discusses the BAP Regulations vis-a-vis the SOLAS requirements for emergency towing. Norman Aff. p. 9. The BAP Regulations require that emergency towing equipment be remotely deployable. The federal requirement contains no such standard. Thus, but for the BAP Regulations vessels calling in Washington waters would have to install remotely deployable towing packages.

6. An important concern for INTERTANKO is that the State of Washington could set a precedent by establishing unilateral regulations. Tanker shipping is international. Tanker shipping is regulated in most respects by the UN body of the International Maritime Organization (IMO). If other states within the United States impose similar, or worse yet dissimilar requirements as the State of Washington, that would not only increase the economic burdens, but could soon make the tanker impossible to operate as different States' requirements for the same equipment might not necessarily be the same. The vessel is carefully designed to accommodate for trading to a large variety of different ports of various sizes and navigational environment. Often a tanker changes

destination underway which means that the discharge port is often not known at the time of loading. The crew onboard is replaced at certain intervals and needs to be trained to operate one uniform equipment set and procedures for every tanker. The use of different types of installations, equipment, and procedures will not only be costly and impractical, but may be highly counterproductive to safety and pollution prevention. It is obvious that a crew that needs to react swiftly in an emergency situation will need to be trained on one set of procedures and equipment.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Signed at Oslo, Norway on July 13, 1996.

/s/ RM Bishop
Robert Macnair Bishop

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

No. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

vs.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MACEACHERN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants.

AFFIDAVIT OF MILES KULUKUNDIS IN SUPPORT OF PLAINTIFF INTERTANKO

I, Miles Kulukundis, testify as follows:

1. I am the President of London and Overseas Freighters (Bermuda), Limited ("LOF"). I am at least 18 years of age and am competent to testify on the matters stated herein, and make this affidavit based on my personal knowledge and belief.

2. LOF is incorporated in Hamilton, Bermuda with its main place of business being Bermuda. LOF is the owner of six

tankers. Those tankers, with a combined capacity of 618,006 deadweight tons, are registered in the Port of Lond[illegible], United Kingdom. All are classed with Lloyd's Register of Shipping ("Lloyd's"). All of LOF's tankers comply with applicable British, international, U.S. Coast Guard, and Lloyd's operational, manning, training, equipment and safety requirements.

3. LOF tankers routinely call at terminals and facilities on the west coast of the United States. Recent port calls include: Point Wells, Washington; Willsbridge, Oregon; San Francisco, California; Richmond Long Wharf, California; Martinez, California; Benicia, California; Los Angeles, California; Long Beach, California; El Segundo, California; and Huntington Beach, California. In 1996, LOF has called twice at a terminal on the Columbia River at Point Wells, Washington. In April 1996, the LOF tanker LONDON SPIRIT was boarded and inspected by personnel from the Washington State Office of Maritime Safety (OMS) to assess compliance with the Washington State prevention plan requirements. That vessel was returning from Point Wells and was berthed at Willsbridge, Oregon at the time of the inspection.

4. LOF is currently a member of the International Association of Independent Tanker Owners ("INTERTANKO"), Oslo, Norway. LOF has been a member of INTERTANKO since 1971. All of LOF's tankers are enrolled in INTERTANKO.

5. I served as Chairman of INTERTANKO from May 1994 to May 1995. Other INTERTANKO positions I have held include: Vice Chairman; member of the Executive Committee; member of the INTERTANKO Council; and Chairman of the Worldscale Committee.

6. I participated in the deliberations of INTERTANKO to bring this action. The feeling was widespread within the organization that INTERTANKO is one of the few, if not the only, organization in the world which could protect tanker owners' interests in effective and uniform environmental and safety regulations. As far as I am concerned, INTERTANKO has always promoted rational environmental measures and has worked to oppose unrealistic or ineffective safety measures. INTERTANKO has opposed unilateral and discriminatory safety and environmental regimes that deviate from international standards.

7. Prior to issuance of the regulations challenged in this litigation, LOF had a Best Achievable Protection (BAP) plan developed under WAC 317-20. This plan was approved by OMS on May 13, 1994. LOF could conform with this plan requirement because it was identical to, and indistinguishable from, all contemporary international, national and industry operational, manning, training, equipage and safety requirements. As far as I am aware, this plan was reviewed for completeness but not substance.

8. Under existing charter agreements, LOF anticipates an increased number of calls at terminal facilities in Puget Sound in 1996 and 1997. Consequently, LOF submitted to OMS a BAP plan developed under WAC 317-21. This plan was submitted on November 1, 1995. LOF incorporated into this plan all applicable international, national and industry operational, manning, training, equipment and safety requirements. For those operational, manning, training, equipage and safety specifications and/or procedures required by the new BAP Standards which differ from those required by British, international, U.S. Coast Guard, and Lloyd's authorities, LOF is seeking to comply to the extent practicable and consistent with international and national law. As far as

I am aware, LOF's BAP plan has been reviewed for completeness but not substance.

9. An LOF tanker complying in all respects with applicable international and national laws and otherwise fully qualified to call at ports in other states of the United States may not lawfully call at ports in the State of Washington unless it adopts the unique additional measures required by WAC 317-21.

10. I regard the extraterritorial influence of the management, training, and personnel requirements of the BAP standards as extremely distressing. The measures required under WAC 371-21 apply to LOF's operations at all times no matter where an LOF vessel is located. In other words, compliance with Washington State regulations extends beyond the borders of the State of Washington and the United States and follows LOF's operations throughout the world.

11. LOF has spent approximately $12,000 to develop, file, and maintain a BAP plan under WAC 317-21. Because many of the BAP's distinct operational, manning, training, equipment and safety requirements are being phased-in, the expenses for compliance are on-going. Costs for meeting the BAP training, recordkeeping and management standards have not been calculated but will be substantial.

12. I regard the distinct and overlapping requirements of the BAP standards as a threat to marine safety. LOF trains its personnel, and operates and equips its tankers, to all applicable international and national standards. The imposition of different or peculiar requirements which vary on a port-by-port basis in the United States will generate confusion and misunderstanding among vessel crews and management. This is the reason why uniform and consistent international and national requirements are so critical.

I declare under penalty of perjury that the foregoing is true and correct.

Signed at London on 31 May, 1996

/s/ Miles Kulukundis

Miles Kulukundis

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

No. 095-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

vs.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MACEACHERN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants.

DECLARATION OF RICHARD T. DU MOULIN IN SUPPORT OF PLAINTIFF INTERTANKO

Richard T. du Moulin, having been duly sworn, testifies as follows:

1. I am Chairman and Chief Executive Officer of Marine Transport Lines, Inc. ("MTL"). MTL is a Delaware Corporation and its corporate office are located at 1200 Harbor Boulevard in Weehawken, New Jersey.

2. Through directly or indirectly owned subsidiaries, MTL owns 5 tankers which it operates in commercial trades.

Through a directly owned subsidiary, MTL also operates 5 tankers for third parties. The tankers owned and or operated by MTL have an aggregate deadweight capacity of 514,006 metric tons and are registered in the United States, Liberia or Panama. All of MTL's tankers are classed with the American Bureau of Shipping and each complies with applicable national and international classification, operational, manning, training, equipment and safety requirements.

3. In 1994, one of MTL's tankers made a single call to the state of Washington and in 1995, one of MTL's tankers called upon the state of Washington twice. During the first five months of 1996, one of MTL's tankers made one call to Washington state. The tankers which called upon Washington state carried crude oil, molten sulphur, chemicals, anhydrous ammonia and petroleum products to the port of Kalama. MTL's tankers also routinely call at terminal facilities located in California, Texas, Lake Charles, the Mississippi River, Florida, North Carolina, Philadelphia and New Jersey.

4. MTL is currently a member of the International Association of Independent Tanker Owners ("INTERTANKO"), Oslo, Norway and has belonged to INTERTANKO since approximately 1982. All of MTL's tankers are enrolled in INTERTANKO.

5. I was elected Chairman of INTERTANKO in May of 1996. Prior to becoming INTERTANKO's chairman, I served as INTERTANKO's Vice Chairman, a member of its Executive Committee and a member of the INTERTANKO council.

6. I participated in the careful deliberations of INTERTANKO which led to the commencement of this action. Consistent with its mandate to promote, on a global basis, the interests of tanker owners and tanker operators, INTERTANKO believes that its members, as well as the ports

upon which their vessels call, are entitled to effective, comprehensive and uniform environmental and safety regulations. Given its broad based membership, INTERTANKO believes that it is particularly well qualified to advance these goals. It is my belief that INTERTANKO has always promoted rational measures to protect the environment while working to oppose unrealistic or poorly crafted safety measures. INTERTANKO has been especially concerned over safety and environmental regimes which deviate from uniform international standards and has devoted particular effort to oppose them.

7. Prior to issuance of the regulations challenged in this action, MTL develpoed a BAP plan as required by WAC 317-20 (the "WAC 20 Plan") which was approved by the Washington State Office of Marine Safety (OMS). Because the WAC 20 Plan approved by the state of Washington was based upon the governing international, national and industry operational, manning, training, equipage and safety requirements by which its tankers are bound, MTL experienced little difficulty in meeting the requirements of the WAC 20 Plan. It is my understanding that the WAC 20 Plan was reviewed for completeness but that an analysis of its substantive content was never undertaken.

8. Under the terms of the charter parties by which MTL's tankers are employed, each tanker must be qualified for the worldwide carriage of liquid bulk cargoes, including the carriage of such cargoes to the State of Washington. To be certain that MTL's tankers may be gainfully employed, MTL submitted to OMS a BAP plan developed under WAC 317-21 (the "WAC 21 Plan"). Incorporated into the WAC 21 Plan were all applicable international, national and industry operational, manning, training, equipment and safety requirements. To the extent that the operational, manning,

training, equipage and safety specifications and procedures required by the WAC 21 Plan differ fform those required by the respective registries of MTL's tankers and the governing international, U.S. Coast Guard, and classification requirements, MTL is seeking, to the extent practicable, to comply with well established norms of national and international law. It is my understanding that the WAC 21 Plan was reviewed for completeness but that an analysis of its substantive content was never undertaken.

9. Notwithstanding perfect compliance with all applicable national and international laws, no MTL tanker may lawfully call upon ports located within the State of Washington unless each such tanker has adopted the unique additional measures prescribed by WAC 317-21.

10. The management, training, and personnel requirements arising from BAP, and the extraterritorial application of those of requirements by the state of Washington, are of extreme concern to me. It is my understanding that the measures required by WAC 317-21 apply to MTL's operations at all times, regardless of the location of a MTL vessel. This means that the regulations of Washington State extend beyond its borders, beyond the borders of the United States and follow each of MTL's tankers as they trade anywhere in the world!

11. MTL has spent a substantial sum to develop, file and maintain the WAC 21 Plan. As MTL phases in BAP's distinct operational, manning, training, equipment and safety requirements, the expense of compliance will increase. For example, one MTL tanker is currently scheduled to be fitted in September with a $50,000 towing arrangement which complies with WAC 317-21-265(2). The cost of installation will be at least $30,000. The cost of meeting the BAP training, record keeping and management standards will also be substantial and ongoing.

12. I consider the distinct, confusing and overlapping requirements arising from BAP to constitute a material threat to the well established and time tested standards which govern marine safety on a worldwide basis. MTL has a long history of strict and comprehensive compliance with all applicable national and international standards in the training of its personnel, the design of its vessels, the equipment with which they are provided and the manner in which they are operated. Despite its good faith concerns for safety and the environment, I believe that the imposition by the state of Washington of different, peculiar or inconsistent requirements is almost certain to generate precisely the kind of confusion and misunderstanding which the current national and international regimes were created to avoid. This confusion and misunderstanding can only have negative consequences.

I declare under penalty of perjury under the laws of the State of New Jersey that the foregoing is true and correct.

Signed at Weehawken, New Jersey on May 30, 1996.

/s/ Richard T. du Moulin
Richard T. du Moulin

STATE OF WASHINGTON

OFFICE OF MARINE SAFETY

September 15, 1995

Chronos Shipping Co., Ltd.
41 Akti Miaouli
185 35 Piraeus, Greece

Re: WASHINGTON STATE OIL SPILL PREVENTION PLAN REQUIREMENTS

Dear Sirs:

On August 24, 1995, the tank vessel ASPHALT CHAMPION entered Washington waters en-route to Portland, Oregon. Washington state rules require tank vessels to submit an Oil Spill Prevention Plan before entering Washington waters. To date, the Office of Marine Safety has not received a prevention plan for the ASPHALT CHAMPION. Enclosed is a Notice of Determination regarding this violation.

We note on January 27, 1994, MARISPOND Inc. submitted a minimum compliance prevention plan to OMS for the ASPHALT CHAMPION and other tank vessels that your company operates. On July 7, 1995 Washington State Oil Spill Prevention Plan rules became effective and required tank vessel owners to submit new prevention plans. Also at this time OMS mailed out a copy of the final rules and a copy of the model prevention plan for tank vessels to all companies that submitted minimum compliance prevention plans.

Under the Revised Code of Washington (RCW) 88.46.040, 88.46.80 and Chapter 317-21-020 Washington Administrative Code (WAC) the owner of a tank vessel is required to submit a Oil Spill Prevention Plan before the vessel enters Washington waters. On September 6, 1995 an inspector from

this office contacted the vessel's Master and Agent to discuss prevention plan submission requirements. Our prevention plan rules contain Best Achievable Protection standards that tank vessels must comply with when operating in Washington waters. Enclosed are copies of RCW 88.46 and Chapter 317-21 WAC. Also enclosed is a Model Oil Spill Prevention Plan for Tankers.

If you have any questions or require assistance, please contact me at (503) 229-6541, fax (503) 229-6954.

Sincerely,

/s/ John Jenicek
John Jenicek
Field Office Supervisor

Enclosures

cc: Rebecca Vandergriff, Assistant Attorney General
Crossway Navigation
MARISPOND
USCG Marine Safety Office Portland
Sunrise Shipping (Portland)

Office of Marine Safety
Olympia, Washington

No. CR-95-001

Date of Issuance: 09/15/95
Vessel Name: ASPHALT CHAMPION
Lloyd's Number: 7329699

NOTICE OF DETERMINATION

TO: Chronos Shipping Co., Ltd.

Address: 41 Akti Miaouli, 185 35 Pireaus, Greece

The Office of Marine Safety (OMS) has determined that you, as owner or operator of the M/V ASPHALT CHAMPION have violated, are violating, or created a substantial potential to violate the provisions of Chapter 88.46 Revised Code of Washington (RCW) as described below. Upon receipt of this Notice of Determination, Chronos Shipping Co., Ltd. has 30 days under RCW 88.46.070 to submit a full, written report to the Office of Marine Safety, stating what steps you have taken or are taking, or both, to comply with this Notice. See RCW 88.46.070(2).

Failure to timely or adequately respond to this Notice may result in an Administrative Order requiring compliance or assessing penalties or both.

DETERMINATION:

The vessel ASPHALT CHAMPION entered Washington waters on September 6, 1995. The vessel is certified by the flag state of Malta to carry oil in bulk as cargo and, therefore, meets the definition of a tank vessel under the Washington Administrative Code (WAC) 317-05-020(21). Under the Revised Code of Washington (RCW) 88.46.040, 88.46.080 and WAC 317-21-020, the vessel's owner or operator was required to submit an Oil Spill Prevention Plan demonstrating

compliance with Best Achievable Protection standards for the ASPHALT CHAMPION to the Office of Marine Safety prior to the vessel entering Washington waters. The Office of Marine Safety had no prevention plan on file for this vessel prior to its entry into Washington waters.

Within 30 days of receipt of this Notice submit the following to Office of Marine Safety:

- A written report, in English, describing how you intend to comply with Chapter 317-21 WAC. The submission of an Oil Spill Prevention Plan, demonstrating compliance with best achievable protection standards, will satisfy this requirement.

By the authority granted Barbara Herman,
Director, Office of Marine Safety

/s/ John Jenicek
Field Office Supervisor, Columbia River

U.S. Department of Transportation

United States Coast Guard

JUN 22 1995

Ms. Barbara Herman
Administrator
State of Washington
Office of Marine Safety
711 State Avenue NE
P.O. Box 42407
Olympia, WA 98504-2407

Dear Ms. Herman:

I am happy to note that the Memorandum of Agreement (MOA) on oil pollution, prevention and response, between the Coast Guard and the State of Washington, was signed by the Commander, Thirteenth Coast Guard District and your Governor an April 24, 1995. This agreement now lays a solid foundation upon which the State of Washington and the Thirteenth Coast Guard District can build a partnership to minimize duplicative efforts, leverage resources, and eliminate existing or potential barriers to trade. I strongly encourage a continuation of the on-going cooperative dialogue with the Thirteenth Coast Guard District in order to most effectively pursue our mutual goals of marine safety and environmental protection.

I would also like to take this opportunity to further our discussion from our meeting of December 16, 1994 and clarify some of my concerns with your letter of April 19, 1995. In that letter, you reference a Coast Guard quote supporting state's rights. The referenced quote also stated, in part, "We must, however, also be mindful of our international agreements". This applies not only with our bilateral agreements with Canada on vessels in U.S. waters, as a result

of the Cooperative Vessel Traffic Management Agreement, but also with equipment, construction, manning, licensing and other existing regulations and initiatives, including those of the International Maritime Organization. Many U.S. statutes and regulations enforced by the Coast Guard are in furtherance of our international commitment. Should widely disparate state requirements be implemented, the possibility arises that compliance with federal and state regulations either becomes a physical impossibility or the state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress. A patchwork of differing and conflicting coastal state and local regulatory initiatives would be confusing to the users and may actually degrade maritime safety and environmental protection.

While section 1018 of the Oil Pollution Act of 1990 (OPA 90) states that nothing in OPA 90 or the Act of March 3, 1851, shall be construed as preempting the authority of any state from imposing any additional liability or requirements respecting the discharge of oil or any removal activities, the Coast Guard does not regard this as a Congressional expression altering the traditional relationship between federal and state governments. Rather, it permits states to impose additional liabilities or requirements with respect to the discharge of oil or removal activities in connection with a discharge within the State of Washington in a manner that does not contravene the federal scheme. Thus, I continue to believe that most standards which apply to vessels trading internationally or between states remain the responsibility of the federal government. It does not give the State of Washington any additional power or authority that did not exist prior to the passage of the act.

In addition, I do not share your opinion that federal and international regulations are "minimal". In my view, current

standards, and the processes in place to develop and improve these standards, reflect decades of practical experience and the current state of usable technology and produce a high level of safety for today and will meet the challenges of the future.

In response to Presidential direction, the Coast Guard is conducting a detailed review of all our existing regulations. One of the goals of this effort is to increase consistency by aligning our regulations to the greatest degree possible with existing international standards. Similar efforts in Washington State would be appreciated.

The door of the Coast Guard is always open. My headquarters program managers continue to provide guidance and comments to the Thirteenth Coast Guard District on Washington State initiatives. I urge the closest possible alignment of state regulatory efforts with federal and international standards and initiatives. I strongly encourage routine meetings between yourself and your staff, and Admiral Lockwood and his staff at the Thirteenth Coast Guard District in Washington State. I firmly believe that, during these periods of scarce resources, there is more than adequate room on the waterfront for many agencies to work cooperatively and leverage our resources for the benefit of the public. By doing so, we can build on each others successes.

Sincerely,

/s/ J.C. Card

J.C. CARD
Rear Admiral, U.S. Coast Guard
Chief, Office of Marine Safety,
Security and Environmental Protection

Memorandum

U.S. Department of Transportation

United States Coast Guard

Subject: REVIEW OF CALIFORNIA OIL SPILL PREVENTION AND RESPONSE ACT

Date: 30 JAN 1991
16455

From: Chief Counsel

Reply to: G-LMI 7-1527
Attn of: Mr. Presley

To: Chief of Staff

1. As you requested I have reviewed the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act ("OPRA") enacted by the California Legislature during its last session. OPRA is one of the several State oil pollution statutes which have been enacted in the aftermath of the Exxon Valdez incident. It provides a good example of the ways in which States are extending the exercise of their police powers to protect their citizens from oil pollution and its effects.

2. The Coast Guard's interest in such State statutes stems primarily from the way in which the regulatory and enforcement regimes which they create, conflict or complement related regimes administered by this agency. A major consideration in this regard is whether the Federal Preemption Doctrine restricts States' authority to regulate conduct or carry out enforcement in particular areas. In the course of similar review of an emergency order issued by the Alaska Department of Environmental Conservation, this Office prepared a Legal Memorandum, attached herewith as Enclosure (1), a portion of which set out the law relating to the Federal Preemption Doctrine.

3. Enclosure (1) sets out a "two tier" analytical approach to the issue of Federal preemption, based largely on principles discussed in *Ray v. Atlantic Richfield,* 98 S.Ct. 988 (1978), and *Chevron v. Hammond,* 726 F.2d 483 (1984). Enclosure (2) builds on Enclosure (1), setting out a model which may be applied to the provisions of any State oil pollution statute. Specific provisions of OPRA are then analyzed within the model, demonstrating thereby the manner in which the Federal Preemption Doctrine has constrained, or may be expected to constrain, the exercise of the State's police powers.

/s/ P.E. Versaw
P.E. VERSAW

Encl: (1) G-L Memo 16451/16601 of 6 Jul 89

(2) Application of the Federal Preemption Doctrine to State Oil Pollution Statutes; an analytical model

APPLICATION OF THE FEDERAL PREEMPTION DOCTRINE STATE OIL POLLUTION STATUTES: AN ANALYTICAL MODEL

Introduction

In the aftermath of the *Exxon Valdez* incident, a number of States have enacted statutes which establish, or revise existing, laws dealing with oil pollution prevention, preparedness, response (including response financing), liability, and compensation.

This memorandum sets out a model by which the legal impact and relationship of those laws to related Federal laws administered and enforced by the Coast Guard may be measured. It builds upon a detailed memorandum ("G-L memo") prepared by the Chief Counsel of the Coast Guard (file no. 16451/16601, dated 6 July 1989) which examined an emergency order issued by the Alaska Department of Environmental Conservation following the grounding of the *Exxon Valdez*. It takes account of the effect of the recently enacted Oil Pollution Act of 1990 (OPA90), Public Law 101-380, and applies the model to the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OPRA) enacted by California in September 1990.

I. THE ANALYTICAL MODEL

General. The model consists of three parts: (A) Whether the State statute being examined contains elements which, *per se*, are preempted by Federal law, or, which could be implemented in a manner which could result in application of the preemption doctrine; (B) Whether the elements which could be implemented in a manner which could result in preemption are limited by provisions specifically designed to avoid that result; and (C) Whether provisions designed to

avoid preemption or otherwise accommodate Federal law give rise to additional legal complications.

Part A - DOES THE STATE STATUTE CONTAIN ELEMENTS WHICH EITHER (1) ON THEIR FACE ARE PREEMPTED BY FEDERAL LAW OR (2) COULD BE IMPLEMENTED IN A MANNER WHICH COULD RESULT IN THE APPLICATION OF THE PREEMPTION DOCTRINE?

At the outset, it must be recognized that there is a general bias against invocation of the preemption doctrine where federal and state oil pollution statutes are in tension. In *Askew v. American Waterways Operators, Inc.*, 93 S.Ct. 1590 (1973) (analyzing a Florida pollution statute), the Supreme Court called attention to the principle "that sea-to-shore pollution [is] historically within the reach of the police power of the States", at 1601. A short time later the Court in *Ray v. Atlantic Richfield Co.*, 95 S.Ct. 988, 994, (1978) (analyzing a Washington pollution statute) noted, " 'we start with the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.' " (Quoting from *Rice v. Santa Fe Elevator Corp.*, 97 S.Ct. 1146, 1152 (1947)).

Applying that principle, the Court has devised a "two tier" analytical approach. The "first tier" looks to "whether Congress has either explicitly or implicitly declared that the States are prohibited from regulating" the subject matter in question. *Ray* at 994. The implication referred to may be drawn in several ways. Again drawing from *Ray's* reference to *Rice*: " 'The scheme of federal regulation may be so pervasive as to make reasonable the inference that Congress left no room for States to supplement it. ... Or the Act of Congress may touch a field in which the federal interest is so

dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject. ... Likewise, the object sought to be obtained by the federal law and the character of obligations imposed by it may reveal the same purpose' ". *Ray* at 994. As to the last point, however, see *Florida Lime & Avocado Growers, Inc. v. Paul,* 83 S.Ct. 1210 (1963), as quoted in *Chevron U.S.A., Inc. v. Hammond*, 726 F.2d 483, 497 (1984), " 'The test of whether both federal and state regulations may operate, or the state must give way, is whether both regulations can be enforced without impairing the federal superintendence of the field, not whether they are aimed at similar or different objectives.' "

The G-L memo describes the "second tier" as "even if Congress has not entirely displaced State regulation over the matter in question, State law is still preempted to the extent that it actually conflicts with Federal law, [citation omitted], or where the State law stands as an obstacle to the accomplishment of the full purposes and objectives of Congress. [citation omitted]." See *Ray* at 994.

-- First tier example

In *Ray*, the Supreme Court applied the *explicit* pronouncement of Congress set out in 46 U.S.C. 215 and 364 (currently 46 U.S.C. 8501 and 8502) relating to pilotage, and held: (1) that the State (Washington) law requiring enrolled (i.e. those operating in the coastwise trade) tankers to take on State licensed pilots was invalid, and (2) that the State was free to require tankers operating on registry (i.e. those operating in the foreign trade) to take on such pilots. *Ray* at 995.

The Court continued this first tier analysis and by considering the *implication* to be drawn from the comprehensive nature of the Tank Vessel Act, 46 U.S.C.

391a (currently 46 U.S.C. Chapter 37) concluded that "[t]he Supremacy Clause [of the Constitution] dictates that the federal judgment that a vessel is safe to navigate United States waters prevail over the contrary state judgment" and that "Congress anticipated the enforcement of federal standards that would pre-empt state efforts to mandate different or higher design requirements." *Ray* at 998.

On the other hand, the Court explained, "Similar in its nature to a local pilotage requirement, a requirement that a vessel take on a tug escort when entering a particular body water is not the type of regulation that demands a uniform national rule." *Ray* at 1005.

-- Second tier example

The G-L memo called attention to the conflict between a requirement to be imposed by the Alaskan Emergency Order under review and existing Coast Guard regulations relating to vessel communications issued under the Port and Waterways Safety Act. One of the directives in the Emergency Order, designed to improve pollution response capability, would require "the Alyeska Marine Terminal to *maintain direct radio contact* with the bridge of each inbound/outbound tanker, accompanying tugs, and Alyeska's oil spill response vessels *while an incoming or outgoing tanker is located at any point between the terminal and Hinchinbrook Entrance."*

The G-L memo then noted that a number of Prince William Sound Vessel Traffic Service regulations at 33 CFR Part 161 address radio communication requirements. The memo concluded that the State requirement might adversely impact on safe navigation in Prince William Sound, the purpose underlying the Federal regulations due to the following conflicting impacts:

a) the difficulty for the vessel to monitor a frequency in addition to that required for the Vessel Traffic Center;

b) the resultant background noises on the bridge affecting concentration; and

c) the practical limitations imposed on a master's ability to respond quickly to an incident by the need to make multiple reports.

Part B - ARE THE ELEMENTS OF THE STATE LAW WHICH COULD BE IMPLEMENTED IN A MANNER SO AS TO RESULT IN PREEMPTION LIMITED BY PROVISIONS SPECIFICALLY DESIGNED TO AVOID THAT RESULT?

The U.S. Court of Appeals for the Ninth Circuit, in *Chevron U.S.A., Inc. v. Hammond,* 726 F.2d 483 (1984), had before it an Alaska statute prohibiting the discharge of ballast water from tankers into the waters of Alaska. Plaintiffs asserted that the State statute conflicted with Federal law in a number of ways. While the court rejected those arguments with respect to one regulatory area (Coast Guard regulations prohibiting certain tankers from storing ballast in cargo tanks unless required by emergency weather conditions); the court took pains to explain, "No party asserts that it is physically impossible to comply with both the Alaska statute and the relevant Coast Guard regulations. Furthermore, *the Alaska statute was amended in 1980 to make it clear that it would not apply in cases where safety reasons dictated non-compliance.*" (Emphasis added.) *Hammond* at 499.

The principle to be applied in this part of the model is found in *Hammond* at 496 where the court quoted from *Merrill Lynch, Pierce, Penner & Smith v. Ware,* 94 S.Ct. 383 390 (1973), which itself was quoting from *Silver v. New York Stock Exchange*, 83 S.Ct. 1246, 1259 (1963), "Moreover state

law should be preempted " 'only to the extent necessary to protect the achievement of the aims of the [federal act in question].' " Consequently, substantial weight should be given to any provisions in a State statute which actually accommodate the otherwise preemptive effect of the superior Federal Law.

Part C - MAY THE PROVISIONS DESIGNED TO AVOID PREEMPTION OR OTHERWISE TO ACCOMMODATE FEDERAL LAW GIVE RISE TO ADDITIONAL LEGAL COMPLICATIONS?

States' attempts to avoid the effects of preemption or otherwise to accommodate their laws to the Federal regime, either by cross references to Federal requirements or by a deferral to Federal action, must be examined. Sometimes State legislatures are not familiar with the applicable provisions of the Federal statutes and regulations to which they refer or defer in laws they enact. While this part of the model is not directly concerned with the application of the Federal Preemption Doctrine it is useful to be aware of inappropriate references so as to be prepared for the problems which may arise when States attempt to implement such laws.

An example of an inappropriate reference which has appeared a number of times in various state oil pollution liability statutes or their implementing regulations concerns financial responsibility requirements. While, Federal oil pollution financial responsibility requirements do not preempt similar requirements imposed by states as a *legal* matter, vessel insurers have traditionally been reluctant to certify insurance coverage against State oil pollution liability. Consequently, as a *practical* matter some States were willing to accept certification in accordance with the requirements of subsection (p) (recently superseded by OPA 90) of section 311. Federal Water Pollution Control Act (FWPCA) as

meeting the State law imposed requirement for coverage of such liability. Such reliance was, of course, illusory. The financial responsibility required under section 311 (p) FWPCA was limited to the coverage of section 311's prescribed liability for *Federal* removal costs. In the event of an oil pollution incident, States and their citizens which relied on this Federal certification would have found themselves without protection. More importantly, litigation to recover costs and damages pursuant to State liability regimes might well have complicated recovery for Federal removal costs under Federal regimes.

APPLICATION OF THE MODEL TO RELEVANT FEDERAL LAWS

General. In applying a first tier analysis under Part A of the model described above, it would be useful to keep in mind some of the Federal statutes whose provisions may be commonly expected to bear upon the question of preemption as applied to State oil pollution laws. For this purpose the relevant Federal statutes fall into the following categories:

a) those which by their terms explicitly preclude State regulation in the same area;

b) those which, by themselves or in conjunction with others, demonstrate an implicit Congressional intent to preclude State regulation in the same area.

c) those which by their terms explicitly express a Congressional intent *not* preclude State regulation in the same area; and

d) those which neither explicitly nor implicitly demonstrate a Congressional intent to preclude or not to preclude State regulation in the same area.

Second tier analysis ("where compliance with Federal and State regulations is a physical impossibility" or the State law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress") is not necessary except for those statutes within categories (c) and (d) above. The specific terms of the federal laws in those categories and State law provisions must be examined, and, only when there is an "irreconcilable conflict between the Federal and State standards" will that specific State law provision be preempted. (See the G-L memo for citations to the references within quotation marks.)

The Federal statutes which most often may be expected to relate to State oil pollution statutes are the following:

[NOTE: this list should not be considered to be exhaustive. It focuses on those statutes whose provisions are most directly related to provisions of the California Statute currently being examined.]

i) Subtitle II of title 46 U.S. Code;

ii) Port and Waterways Safety Act, (33 U.S.C. 1221 *et seq.*);

iii) Federal Water Pollution Control Act, Section 311 FWPCA, (33 U.S.C. 1321);

iv) Oil Pollution Act of 1990, Title I (33 U.S.C. 2701 *et seq.*).

(i) Subtitle II of title 46 U.S. Code

This law deals with a broad range of merchant vessel and vessel personnel regulation. As noted above, the decision in *Ray* addressed the question of pilotage and tanker construction and design standards.

Pilotage

The provisions of this subtitle concerned with pilotage fall within *category (a)* (with respect to enrolled vessels) and *category (c)* (with respect to vessels under registry and foreign vessels.)

Tanker Construction and Design

The provisions of this subtitle concerned with tanker construction and design fall within, *category (b)*.

Vessel Equipment for Safety

The provisions of this subtitle concerned with safety requirements for equipment have not been addressed by the courts. However, equipment safety regulation pursuant to the Ports and Waterways Safety Act was referred to in *Ray* where the Court found an implied Congressional intent to preclude state regulation. Consequently, it is probable that provisions of subtitle II concerned with equipment regulation and requirements for the purpose of promotion safety, fall within *category (b)*.

Vessel Personnel Qualification and Competence

The provisions of subtitle II concerned with vessel personnel qualification and competence have, similarly, not been addressed by the courts as to their preemptive effect. However, a strong argument can be made that vessel personnel qualification and competence regulation has been traditionally viewed as exclusively within Federal competence. Furthermore, the same considerations requiring exclusivity in vessel safety regulation referred to in *Ray*, would apply in this area as well. Finally the extent to which the Coast Guard has exercised its regulatory authority in this field with Congress' acquiescence leads to an implication of Congressional intention that this area should be solely the

province of Federal regulation. As a consequence it is reasonable to conclude that the provisions of subtitle II concerned with vessel personnel and competence fall within *category (b)*.

(ii) Ports and Waterways Safety Act

As explained in the G-L memo, the Ports and Waterways Safety Act places the Federal government in the primary role insofar as vessel safety is concerned.

Vessel Equipment and Navigation for Safety

The statute provides authority for vessel navigational regulation, including size limitation. In *Ray*, at 1002, the Court expressed the view that Washington's statutory limit on tanker size was invalid due to the authority provided, and in fact exercised, under the predecessor statute to the Port and Waterways Safety Act. The Court reasoned that this was the case even though there was no specific conflict between the Coast Guard's regulation and the applicable state statute.

It was enough that Congress had provided broad authority and responsibility to consider all interests and to assure consistency in prescribing the necessary regulatory regime. The Coast Guard's execution of this authority was sufficient to oust the State of its competence to regulate in the field. Language in *Ray* makes it clear that this principle applies to vessel equipment as well as vessel navigation. Therefore, it is clear that the provisions of the Act authorizing regulation of vessel equipment and navigation for safety purposes fall within *category (b)*.

Structural Safety

There are two areas where parallel State regulatory authority is preserved under the Port and Waterways Safety Act. By its own terms the Act authorizes State regulation of

structure safety. These provisions therefore fall within *category (c)*.

Tug Escorts

The one area where the *Ray* decision, at 1005, found that the *States have retained the authority* to prescribe vessel related requirements concerns *tug escorts*.

(iii) Federal Water Pollution Control Act, Section 311 FWPCA, (33 U.S.C. 1321)

Matters subject to regulation under section 311 FWPCA are:

a) the prohibition of oil and hazardous substance discharges;

b) discharge notification requirements;

c) the authorization to undertake response measures and to obtain judicial assistance where necessary;

d) the organization of response activities (contingency plans, response units, response groups, area committees, etc.);

e) liability relating to the discharge of oil or hazardous substances;

f) methods and procedures for removal of discharged oil and hazardous substances;

g) criteria for local and regional contingency plans;

h) procedures, methods, and equipment and other requirements for equipment to prevent, contain and remove discharges of oil and hazardous substances;

i) the inspection of vessels, removal equipment, and cargoes of oil; and

j) tank vessel and facility response plan requirements.

As amended by OPA90, section 311(o)(2) FWPCA provides:

> (2) Nothing in this section shall be construed as preempting any State or political subdivision thereof from imposing any requirement or liability with respect to the discharge of oil or hazardous substance into any waters within such State, or with respect to any removal activities related to such discharge.

Consequently, all of the provisions of section 311 FWPCA fall within *category (c)*.

(iv) Oil Pollution Act of 1990, Title I (33 U.S.C. 2701, et seq.)

Title I of OPA90 applies to the following areas:

a) oil pollution liability;

b) funding for compensation for providing response financing and supplementary compensation for costs and damages related to oil pollution;

c) compulsory financial responsibility for liability prescribed under this title.

Section 1018 of OPA90 provides that nothing in the Act shall affect or be construed or interpreted as preempting the authority of any State or political subdivision from imposing any additional liability or requirements respecting the discharge of oil or other pollution by oil within such State or any removal activities in connection with such a discharge. Similarly, a clear disclaimer of preemption is set out with respect to State funds and criminal and civil sanctions prescribed under State law relating to the discharge or substantial threat of a discharge of oil.

Consequently the provisions of title I of OPA90 fall within *category (c)*.

[NOTE: Section 1018 of OPA90 refers to "this Act" in its disclaimer of preemption. Since OPA90 in other titles amends a number of provisions of subtitle II of title 46 U.S. Code, there may be some concerns that Congress intended to affect the preemption situation relating to those provisions as well. However, the provisions of section 1018 apply only to: the discharge or substantial threat of oil or other pollution, removal activities, and funds. These matters are *not* the subject of any provision of subtitle II amended by sections in other titles of OPA90; therefore, Section 1018 does not apply to those amendments.]

Summary of Model

Part A - Does the State statute contain elements which either (1) on their face are preempted or (2) could be implemented in a manner which would result in preemption?

First tier: What is the Federal statute which is most relevant to the State statute being examined? What is the category of that Federal statute?

Second tier: If a category (c) or (d) Federal statute is relevant, is there or could there be a direct conflict between the State statute or its implementation and the Federal Statute and its implementation?

Part B - Are the elements of the State law which could be implemented in a manner so as to result in preemption limited by provisions designed to avoid that result?

Part C - May the provisions designed to avoid preemption or otherwise accommodate Federal law give rise to additional legal complications? (Are there other legal complications of interest to the Coast Guard?

II. APPLICATION OF ANALYTICAL MODEL TO THE CALIFORNIA STATUTE

Introduction

The analytical model described above now will be applied to the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OPRA) recently enacted by California. Reference is made only to those provisions of OPRA which may give rise to questions concerning the application of the Federal Preemption Doctrine, specifically with respect to the Federal statutes listed in Part I. The provision to be examined will be identified together with its subject matter, followed by the application of the model. For purposes of simplicity the provision will be identified by the indicated section or article number rather than by its specific location in the Codes of California.

Section 8670.7 - Administrator's Authority Respecting Response

Part A - Answer to question: Possible preemption.

First tier: Relevant Federal statute - section 311 FWPCA [category (c)].

Second tier: Possible conflict if Administrator uses dispersant without Federal approval.

Part B - Answer to question: Yes, Administrator must consult with and cooperate with Federal On Scene Coordinator

Part C - Answer to question: No other complications.

Section 8670.9 Administrator To Develop Compact With Other States

Part A - Answer to question: Possible preemption.

First tier: Relevant Federal statutes: Section 311, FWPCA [category (c)], and Ports and Waterways Safety Act (vessel safety and traffic) [category (b)].

Second Tier: Possible conflict if compact seeks to regulate.

Part B - Answer to question: Yes, Administrator must coordinate development of the compact with the Coast Guard.

Part C - Answer to question: No other complications.

Section 8670.10 - Administrator To Conduct And Set Standards For Drills

Part A - Answer to question: Possible preemption.

First tier: Relevant Federal statute: Section 311, FWPCA [category (c)].

Second tier: Possible conflict if standards conflict with Federal standards.

Part B - Answer to question: No.

Part C - Answer to question: No other complications.

Section 8670.16 - Administrator To Promote Federal Adoption of Laws

Part A - Answer to question: No preemption.

First tier: Relevant federal statute: Ports and Waterways Safety Act (vessel equipment and traffic) [category (b)].

Second tier: Not applicable as no conflict.

Part B - Answer to question: Yes, Administrator limited to pressing Federal government to adopt regulations or statutes.

Part C - Answer to question: No other complications.

Section 8670.17 - Administrator to Regulate Vessels Indirectly Through Terminals

Part A - Answer to question: Possible preemption.

First tier: Relevant Federal statutes - Ports and Waterways Safety Act (equipment and operation of vessels) and subtitle II of Title 46 U.S. Code (equipment and personnel of vessels) [both category (b)].

Second tier: Possible conflict (tug escort) [NOTE: This section of OPRA contains authority to impose tug escort requirements. As noted above, the Supreme Court in *Ray* held that States were not preempted from imposing such requirements. However, a second tier analysis might result in preemption where such a requirement conflicts with a Coast Guard regulation specifically addressing tug escort.]

Part B - Answer to question: No.

Part C - Answer to question: No other complications.

Section 8670.18 - Administrator To Evaluate Coast Guard Inspection Program

Part A - Answer to question: Possible preemption.

First tier: Relevant Federal statutes: Section 311, FWPCA [category (c)]; subtitle II of Title 46 U.S. Code [category (b)].

Second tier: Possible preemption if Administrator adopts conflicting inspection requirements.

Part B - Answer to question: Yes, Administrator must consult with Coast Guard concerning State inspection and may not duplicate Coast Guard activities.

Part C - Answer to question: No other complications.

Section 8670.20 - Tanker Or Barge Disability Notification To Coast Guard

Part A - Answer to question: No preemption.

First tier: Relevant Federal statutes: Section 311, FWPCA [category (c)]; subtitle II of Title 46 U.S. Code [category(b)].

Second tier: Not applicable as no conflict.

Part B - Answer to question: Yes, notification must be made to Coast Guard.

Part C - Answer to question: Possible complication since requirement not exactly same as Coast Guard requirement. [Compare 46 C.F.R. Part 4.05-1); also applies to vessel within 12 miles of the shore (probably beyond California's competence)].

Section 8670.21 - Administrator To Negotiate Vessel Traffic Service System With Coast Guard

Part A - Answer to question: No preemption.

First tier: Relevant Federal statute: Ports and Waterways Safety Act (vessel traffic system) [category (b)].

Second tier: Not applicable as no conflict.

Part B - Answer to question: Yes, Administrator must obtain agreement with Coast Guard.

Part C - Answer to question: No other legal complications, nevertheless, it may be difficult to accommodate California and Coast Guard schedules and funding schemes.

Section 8670.22 - Prohibition Of Vessel Violating OPA90 (Amendment to 46 U.S.C. Chapter 37) Double Hull Requirement

Part A - Answer to question: No preemption.

First tier: Relevant federal statute: Subtitle II of title 46 U.S. Code (vessel construction) [category (b)].

Second tier: Not applicable as no conflict.

Part B - Answer to question: Yes, as merely enforcement of Federal statute.

Part C - Answer to question: May be complications as to enforcement.

Article 4 - Oil Spill Response and Article 5 - Contingency Planning and Articles 6 & 7 - Funds

Part A - Answer to question: Possible preemption.

First tier: Relevant Federal statutes: Section 311 FWPCA and OPA 90 [both category (c)].

Second tier: Possible conflict *re* Articles 4 & 5 if regulations in conflict with Federal regime.

Part B - Answer to question: Oil spill response subject to Coast Guard direction.

Part C - Answer to question: No other complications.

Section 8670.30 - Interim Vessel Contingency Plan, Including Proof of Financial Responsibility as Provided by Federal Law

Part A - Answer to question: Possible preemption.

First Tier: Relevant Federal statutes: Section 311, FWPCA and OPA90 [both category (c)].

Second Tier: Possible conflict if Administrator adopts conflicting requirements.

Part B - Answer to question: Yes certain requirements must be consistent with National Contingency Plan; financial responsibility provided under Federal law accepted.

Part C - Answer to question: Virtually certain to have additional complications stemming from acceptance of "Federal" (i.e. presumably under OPA90) financial responsibility proof

- complication # 1 - Federal financial responsibility applies *only* to OPA90 liability regime
- complication # 2 - OPRA requires that the State of California be named on the policy as an additional insured; that is inconsistent with Coast Guard requirements, and P & I cover for vessels does not now name

additional insured and would be most unlikely to do so for California.

Section 8670.37.51 - Financial Responsibility

Part A - Answer to question: No preemption.

First tier: Relevant Federal statute: OPA90 [category (c)].

Second tier: Not applicable as no conflict.

Part B - Answer to question: No attempt to accommodate Federal law.

Part C - Answer to question: Since no attempt to accommodate Federal law, no complications. [NOTE: Possible Law of the Sea innocent passage problem, as OPRA prohibits vessel transport of oil "across marine waters of the state" without state issued certificate of financial responsibility.]

Division 7.8 - Oil Spill Prevention and Response

Part A - Answer to question: Possible preemption.

First tier: Relevant federal statute - Section 311 FWPCA [category (c)].

Second tier: Possible conflict if regulations in conflict with Federal regime.

Part B - Answer to question: Yes, regulations required to be consistent with Coast Guard regulation; statute requires consultation with Coast Guard.

Part C - Answer to question: No other complications.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MACEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

v.

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; AND OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF C. JONATHAN NEEL
(States/British Columbia Oil Spill Task Force)

STATE OF WASHINGTON)
) ss
COUNTY OF THURSTON)

I, C. JONATHAN NEEL, being first duly sworn on oath, depose and state as follows:

1. I am employed by the State of Washington Department of Ecology. Presently, I hold the position of Spill Program Legislative and Intergovernmental Coordinator. Past positions have included Manager of the Ecology's Spill Management and Enforcement Section during the Nestucca oil spill, the Matsukaze oil spill, and MCN 5 barge oil spill. A copy of my resume is attached.

2. Washington State had experience a number of major *marine* incidents immediately prior to the Exxon Valdez including the:

SS Mobil Oil tanker spill (incident date - 3/20/84; location - Columbia River; material spilled - 200,000 gallons heavy oil; primary cause - improper installation of steering pin during maintenance).

Arco Anchorage tanker spill (12/21/85; Port Angeles; 239,000 gallons of crude oil; grounding as a result of pilot error).

MCN 5 barge oil spill (1/31/88; near Anacortes; 70,000 gallons heavy oil; improper overloading of barge).

Matsukaze double hull tanker grounding (4/28/88; rocks at Crescent Bay; no spill; officers on bridge asleep).

Nestucca barge oil spill (12/23/88; off Grays Harbor; 231,000 gallons of bunker oil; towing hawser in extremely poor condition).

3. All of these spills were caused by human error and clearly avoidable with relatively simple improvements in the marine industry's operations. The lack of adequate standards

and regulatory oversight of the marine industry was readily apparent to Ecology.

4. Based upon this past risk exposure, the exceptionally high economic value of Washington's natural resources, and the need to better coordinate West Coast spill response activities (particularly in the aftermath of the Nestucca barge oil spill) Ecology and the British Columbia Ministry of Environment decided that a formal mechanism should be established to coordinate spill related activities. In early 1989, British Columbia Premier Vander Zalm and Washington Governor Booth Gardner formed the British Columbia/Washington Oil Spill Task Force.

5. The day after the first Task Force meeting, the Exxon Valdez spill occurred on March 24, 1989, in Alaska. The states of Alaska, Oregon and California joined the Task Force soon after the Exxon spill when the four West Coast Governors and the British Columbia Premier signed a memorandum of cooperation. The name of the organization was then changed to the States/British Columbia Oil Spill Task Force (Task Force) and we began the West Coast's coordinated approach to oil spills. The members of the Task Force are the heads of the agencies responsible for oil spill prevention and response on the West Coast. One staff representative was assigned from each agency to coordinate input into the routine business of the Task Force. I am Ecology's representative.

6. The day to day activities of the Task Force are now coordinated by Jean Cameron, the organization's full time executive coordinator in Portland, Oregon. I am the Task Force's contract officer and manage the budget which is funded through member contributions through contracts with Ecology.

7. During my early involvement with the Task Force, the organization completed a number of independent studies. These studies were managed by the organization's "Prevention Alternatives Subcommittee", to which I was Washington's representative. The findings of this subcommittee constituted the rationale for many of the Task Force's recommendations. The studies were coordinated by a Canadian consulting firm, David Dickens and Associates. The actual studies were carried out by Dickens and a number of subcontractors.

8. The Task Force decided early on to bring all of the information generated by its committees together in one major technical and policy document. This document was titled the "Final Report of the States/British Columbia Oil Spill Task Force" and published in October 1990. *See* Exhibit 38: Final Report of the States/British Columbia Oil Spill Task Force.

9. The final report's recommendations were a synthesis of all information on oil spill prevention and response readily available at that time. In addition to the extensive Task Force funded studies, the final report was based upon a broad array of studies and reports for example:

> The 11 recommendations presented in the report entitled "Improving Marine Traffic Safety on Puget Sound Waterways - A Technology Assessment" published December 15, 1982. The report placed emphasis on human error as a primary causative factor in vessel casualties. The recommendations addressed marine safety issues ranging from speed limits, mariner qualifications, enforcement, implementation of National Transportation Safety Board recommendations, near-miss reporting, and bridge communications.

The 29 recommendations presented in the "Report to the Legislature" of the Washington State Oil Spill Advisory Committee, December 1986. This report was mandated after the Arco Anchorage oil spill. These recommendations addressed a range of vessel spill prevention and response issues including bunkering and lightering, and anchorage areas.

The 59 recommendations presented in the report of the Alaska Oil Spill Commission entitled "Spill - The Wreck of the Exxon Valdez - Implications for Safe Marine Transportation," January 1990. These recommendations addressed a range of marine safety issues including the need to effectively regulate foreign flagged vessels, application of best achievable technology, and the need for vessel owner commitment to safety.

The 14 recommendations presented in the 126 page report entitled "Issue Paper - Spill Prevention - Means of Preventing Spills of Petroleum and Other Hazardous Substances in Puget Sound" published by Washington State's Puget Sound Water Quality Authority, March 1990. (I participated in some of the committee's deliberations.) The recommendations dealt with training of vessel personnel, vessel design, spiller liability, and Puget Sound's vessel traffic system (VTS) among other issues.

We hoped that the weight of all of the West Coast states and province adopting the most important ideas in all of the studies evaluated by the Task Force would provide additional impetus for their actual implementation. The recommendations in the Task Force report were intended to be forwarded to and implemented by a range of entities including: the private sector; federal law makers and agencies; and state and provincial law makers and agencies.

10. Lead authors of the final report included one representative from each of the West Coast states and province of British Columbia. These individuals were: Jon Neel, Washington (overall lead author); Amy Glad, California; John Bones, British Columbia; Bruce Sutherland, Oregon and Lynn Kent, Alaska. Paul Heimowitz, who at that time worked for Washington State's Puget Sound Water Quality Authority, was also a major contributor.

11. A summary of the final report was presented at and published in the proceedings of the 1991 International Coastal Zone Conference in Long Beach, California.

Relationship Between the Task Force Recommendations and Washington State Legislation.

12. The Washington State Legislature passed a number of oil spill related bills during the 3 sessions immediately following the Nestucca and Exxon Valdez oil spills. As head of Ecology's Enforcement and Spill Management Section at that time, I was involved in the development of these legislative initiatives.

These legislative actions and requests included:

- In January 31, 1989, then Ecology Director Christine Gregoire wrote Washington's congressional delegation requesting a number of changes to federal law. The requests addressed oil spill liability, navigation requirements, oil barge double hulling, on-board spill response equipment, changes to the federal penalty structure, and improvements to the Coast Guard Vessel Traffic System (VTS).
- 1989 Session - House Bill (HB) 1853 & 1854: This legislation established a streamlined compensation

system for damages to state natural resources resulting from oil spills. House Bill 2242: Established financial responsibility requirements.

- 1990 Session - House Bill 2494: This legislation established spill response requirements for certain vessels and facilities. The Chair of the House Environmental Affairs committee went on record that, while the current session would focus on spill response, the subsequent session would focus on spill prevention. She made it clear that the complexity of spill prevention would require more time to complete thoughtful legislation.
- 1991 Session - House Bill 1027: This legislation established a wide array of spill prevention requirements and provided for a complete recodification of all spill related statutes. Major features of the 1991 legislation included creation of a new revenue source, establishment of new state agencies (including the Office of Marine Safety), and extensive spill prevention requirements.

The 1991 legislation was drafted by the Legislature's House Environmental Affairs committee's chief counsel with extensive input from Ecology and the Governor's office. Sometime following publication of the public review Draft Task Force report in July 1990, discussions between legislative staff, Ecology and the Governor's office took place in earnest as to the scope of the following year's spill proposed legislation. Initial and later discussions (after adoption of the final report) consciously focused on the recommendations outlined in Task Force report as the starting point for considering the potential array of issues to be addressed in the legislation.

The legislative development team wanted to make sure that these critical ideas, which were carefully evaluated and adopted by the Task Force, were addressed wherever possible. Once the legislation was drafted, extensive consultations took place during that fall and winter with all key stakeholders to obtain their input on the appropriateness of the proposed legislative concepts. By the conclusion of the 1991 session and the passage of House Bill 1027, the following recommendations had been addressed to some degree by state legislation:

Joint Recommendations

Near Miss Reporting
Tow Cables
Vessel Safety Measures
Petroleum Facility Worker Training
Mariner Qualifications
Tug Crew Training

Strong Sanctions
Proof of Financial Responsibility
Natural Resource Valuation

Enforcement Staff

Prevention Plans
Response Plans
Local Participation
Clean Up Requirements
Vessel Inspections
Prevention Education
Transfer Operations Review
Wildlife Rescue Training and Equipment
Transfer Containment
Incident Command System (ICS)

The specific information for each of these recommendations is found in the Final Report of the Task Force on pages 3-8. *See* Exhibit 38: Final Report of the States/British Columbia Oil Spill Task Force.

Washington Recommendations

Pilot Qualifications	Barrel Tax
Subtidal Land Losses	Economic Incentives
Federal Consistency	Harbor Safety Committees
State Agencies	

The specific information for each of these recommendations is found in the Final Report of the Task Force on pages 80-83. *See* Exhibit 38: Final Report of the States/British Columbia Oil Spill Task Force.

/s/ C. Jonathan Neel
C. JONATHAN NEEL

Signed or attested before me, *Laurie L. Carley*, by *C. Jonathan Neel*.

DATED this *3rd* day of *June*, 1996.

/s/ Laurie L. Carley
NOTARY PUBLIC, in and for the
State of Washington.
My commission expires: 1/31/99

[SEAL]

EXHIBIT 38

Final Report of the
States/British Columbia
Oil Spill Task Force

Province of British Columbia
State of Washington
State of Oregon
State of Alaska
State of California

October 1990

I. Executive Summary

A. *OVERVIEW*

Following the 231,000 gallon (873 m^3) *Nestucca* oil spill off the coast of Washington in December, 1988, British Columbia Premier William Vander Zalm and Governor Booth Gardner of Washington established the British Columbia/Washington Task Force on Oil Spills. The day after the first Task Force meeting, the *Exxon Valdez* struck Bligh Reef in Prince William Sound, and the Task Force membership soon expanded to include Alaska, Oregon, and California. (Maps 1-6 illustrate petroleum transportation flows and facilities on the West Coast and in each individual jurisdiction).

The mandate of the Task Force was to a) investigate ways and means of preventing oil spills; b) to review oil spill response procedures; c) document and assess the mechanisms for

handling compensation claims; and d) to develop a coordinated contingency plan for preventing and responding to oil spills in the future. This goal was to culminate in the adoption of a comprehensive set of recommendations which, if implemented, would minimize (to the extent practicable) the probability of major and catastrophic spills and help assure an effective response to such incidents. The Task Force used periodic meetings, subcommittee investigations, training forums, and other tools to accomplish this mandate.

B. *MAJOR FINDINGS*

Four Task Force subcommittees produced a detailed set of findings, many of which underlie joint and individual recommendations. These findings can be summarized by the following points:

1. Recent spills from the *Nestucca, Arco Anchorage, Exxon Valdez,* and *American Trader* have revealed significant problems in oil transportation management, including:

   a. Inadequate personnel training and qualifications
   b. Shortcomings in vessel design and integrity
   c. Insufficient traffic management
   d. Gaps in regulatory oversight
   e. Incomplete cost recovery by states/provinces

2. Despite research in spill cleanup technology, it is unlikely that a large fraction of oil can be recovered from a catastrophic spill.

3. Since response efforts can not effectively reduce the impact of large oil spills, prevention of spills must be the prime strategy in developing solutions to this issue.

4. Readiness and response to smaller size spills of oil or

refined petroleum products must still be emphasized, since much of the West Coast traffic is by barge and freighters carrying fuel.

5. Comprehensive oil spill prevention demands participation by industry, citizens, environmental organizations, and all governmental jurisdictions.

6. The States/B.C. Task Force on Oil Spills should continue to promote coordination of West Coast oil spill prevention and response efforts.

C. *JOINT RECOMMENDATIONS*

The following recommendations have the full support of all Task Force members. Individual recommendations by each Task Force member are presented in the body of the report, beginning on page 51. Recommendations have been subdivided by the technical nature of the issues to assist the reviewer in analyzing recommendations with similar characteristics.

The recommendations are not in priority order; priorities are detailed in section IV. The recommendations vary as to the governmental body that has authority to make the suggested changes, and will be forwarded to the appropriate "authorizing agent" through mechanisms identified in an implementation strategy (page 92).

The main objective of this Task Force, as reflected in the following recommendations, is to continue to work towards coordinated prevention and response to oil spills for the Pacific coast. Two aspects of this effort are particularly important: mutual assistance among the members for catastrophic spills, and interjurisdictional protocols for transboundary spills. To achieve these objectives, the Task Force will continue to work together to implement similar

response procedures to ensure consistency among the separate jurisdictions. To minimize the need for any response, recommendations to prevent spills occurring along the coast have been developed and given high priority.

Vessel Traffic Reduction

RECOMMENDATION 1: Petroleum Conservation

Implement programs designed to reduce petroleum consumption, such as conservation measures (including appliance and automobile efficiency standards, recycling, and effective mass transit), alternative energy source research, and economic incentives.

RECOMMENDATION 2: Alternative Oil Transportation

Review proposals for alternative transportation modes which would reduce petroleum transportation by tanker in high risk and environmentally sensitive areas. In reviewing any proposals, Task Force members are committed to insuring compliance with all applicable state/provincial/federal laws, including their processes to involve the public.

Vessel Traffic Management

RECOMMENDATION 3: Tug Escorts - Single Propulsion

Require tug escorts for all single boiler or single engine, and single screw tank vessels carrying oil or other petroleum products in waterways designated as high risk by an individual state or province.

RECOMMENDATION 4: Tug Escorts - Tonnage Requirements

Review and, if appropriate, reduce dead weight tonnage specifications for tug escorts requirements.

RECOMMENDATION 5: Vessel Traffic Service Systems

Upgrade vessel traffic service systems by replacing outdated equipment, eliminating gaps in coverage, increasing operator training and assignment length, and establishing mandatory participation in vessel traffic service systems in high-risk or congested areas.

RECOMMENDATION 6: Near Miss Reporting System

Establish, on a trial basis with a subsequent assessment of usefulness, a near miss reporting system which links directly with vessel inspection information, vessel traffic, and vessel casualty database systems.

RECOMMENDATION 7: Tow Cables

Develop and implement a mandatory set of guidelines for tugs on tow cable size and material specifications, cable maintenance practices, cable handling equipment design and barge recovery plan preparation.

RECOMMENDATION 8: Vessel Safety Measures

Establish regional safety measures, including speed limits, based on escort vehicle or other limitations, for all laden tank vessels in inland waters and their critical approaches.

RECOMMENDATION 9: Tow Systems

Require towing systems and plans on all tankers carrying oil and other petroleum products.

Vessel Design

RECOMMENDATION 10: Double Hulls

Require double hulls for all new tank vessels designed to carry oil or other petroleum products as cargo.

RECOMMENDATION 11: Onboard Navigation Improvements

Require all tankers carrying oil or other petroleum products in coastal and inland waterways to possess and operate an onboard navigation system, such as an Electronic Chart Display Information System (ECDIS).

Personnel

RECOMMENDATION 12: Petroleum Facility Worker Training

Require state/province certification of training programs for managers, workers, and safety officers at terminals which handle oil or other petroleum products. Program certification requirements should include spill prevention and response training.

RECOMMENDATION 13: Mariner Qualifications

Require more stringent mariner qualifications, including spill prevention and response training, simulator training, vessel class and size restrictions on deck officer certification, and alcohol and drug testing.

RECOMMENDATION 14: Tug Crew Training

Mandate oil spill response training for all tug crews involved in tank vessel operations.

RECOMMENDATION 15: Crew Requirements

Require two licensed officers (including pilot where appropriate) to be present on the bridge of all tankers carrying oil or other petroleum products while in inland waterways. Require adequate crew levels, sufficient to meet normal and emergency operation needs, for tank vessels carrying oil or other petroleum products.

RECOMMENDATION 16: Dedicated Tug Crews

Assign dedicated trug crews to specific classes of tugs and tank barges carrying oil or other petroleum products to assure familiarity with tug and tank barge operating characteristics.

Enforcement, Penalties, and Liability

RECOMMENDATION 17: Strong Sanctions

Legislate strong levels of civil and criminal sanctions for noncompliance with oil spill regulations.

RECOMMENDATION 18: Proof of Financial Responsibility

Raise state/Canadian federal proof of financial responsibility requirements to ensure spillers can finance oil spill related cleanup and damage costs.

RECOMMENDATION 19: Natural Resource Valuation

Develop and require use of methods of natural resource valuation which fully incorporate non-market and market values in assessment of damages resulting from spills.

RECOMMENDATION 20: Cost Recovery

Develop responsible party contracts to aid in the recovery of all natural resource damage and cleanup costs.

RECOMMENDATION 21: Liability Limits

Remove any ambiguity in federal law and guarantee a state's right to fully exercise its own liability standard. Increase the maximum limit of liability for oil pollution damage under Canadian law.

RECOMMENDATION 22: Coast Guard Enforcement

Increase the Coast Guard's ability to conduct routine on-water

surveillance patrols by increasing funding to U.S. Marine Safety Offices and Canadian Coast Guard Regional Offices.

RECOMMENDATION 23: Enforcement Staff

Establish adequate environmental resource agency staffing level devoted to enforce compliance with spill planning requirements, and aggressively pursue legal action against violators.

Regulatory Oversight

RECOMMENDATION 24: Prevention Plans

Require all facilities (and tank vessels larger than 10,000 dwt) which handle oil or other petroleum products to develop and implement spill prevention plans, which would at a minimum include risk-reducing transfer methods and personnel training specifications.

RECOMMENDATION 25: Response Plans

Require all facilities (and tank vessels larger than 10,000 dwt) which handle oil or other petroleum products to develop and implement spill response plans, which would at a minimum include response time, equipment, and staff support specifications.

RECOMMENDATION 26: Local Participation

Each state/province shall recognize and utilize local citizen expertise and knowledge in spill prevention and response efforts. This may include a volunteer training and coordination plan to enhance preparedness.

RECOMMENDATION 27: Clean Up Requirements

Ensure that all state, provincial, and federal agencies act in full cooperation to require the spiller or other responsible

party to meet all applicable state, provincial, and federal performance requirements.

RECOMMENDATION 28: Vessel Inspections

Require periodic (but not less than every two years) structural and mechanical integrity inspections of vessel equipment and hull structures on all tank vessels carrying oil or other petroleum products. Develop a priority inspection system for more frequent inspections of particular tanker features essential to safety, and for certain tankers, equipment, and companies with a history of stress fracture incidents and other safety problems.

Law of The Sea Treaty Provisions

Article 1
Use of terms and scope

* * * *

2. (1) "States Parties" means States which have consented to be bound by this Convention and for which this Convention is in force.

(2) This Convention applies *mutatis mutandis* to the entities referred to in article 305, paragraph l(b), (c), (d), (e) and (f), which become Parties to this Convention in accordance with the conditions relevant to each, and to that extent "States Parties" refers to those entities.

Article25
Rights of protection of the coastal State

1. The coastal State may take the necessary steps in its territorial sea to prevent passage which is not innocent.

2. In the case of ships proceeding to internal waters or a call at a port facility outside internal waters, the coastal State also has the right to take the necessary steps to prevent any breach of the conditions to which admission of those ships to internal waters or such a call is subject.

3. The coastal State may, without discrimination in form or in fact among foreign ships, suspend temporarily in specified areas of its territorial sea the innocent passage of foreign ships if such suspension is essential for the protection of its security, including weapons exercises. Such suspension shall take effect only after having been duly published.

Article38
Right of transit passage

1. In straits referred to in article 37, all ships and aircraft enjoy the right of transit passage, which shall not be impeded; except that, if the strait is formed by an island of a State bordering the strait and its mainland, transit passage shall not apply if there exists seaward of the island a route through the high seas or through an exclusive economic zone of similar convenience with respect to navigational and hydrographical characteristics.

2. Transit passage means the exercise in accordance with this Part of the freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait between one part of the high seas or an exclusive economic zone and another part of the high seas or an exclusive economic zone. However, the requirement of continuous and expeditious transit does not preclude passage through the strait for the purpose of entering, leaving or returning from a State bordering the strait, subject to the conditions of entry to that State.

3. Any activity which is not an exercise of the right of transit passage through a strait remains subject to the other applicable provisions of this Convention.

Article305
Signature

1. This Convention shall be open for signature by:

(a) all States;

(b) Namibia, represented by the United Nations Council for Namibia;

(c) all self-governing associated States which have chosen that status in an act of self-determination

supervised and approved by the United Nations in accordance with General Assembly resolution 1514 (XV) and which have competence over the matters governed by this Convention, including the competence to enter into treaties in respect of those matters;

(d) all self-governing associated States which, in accordance with their respective instruments of association, have competence over the matters governed by this Convention, including the competence to enter into treaties in respect of those matters;

(e) all territories which enjoy full internal self-government, recognized as such by the United Nations, but have not attained full independence in accordance with General Assembly resolution 1514 (XV) and which have competence over the matters governed by this Convention, including the competence to enter into treaties in respect of those matters;

(f) international organizations, in accordance with Annex IX.

2. This Convention shall remain open for signature until 9 December 1984 at the Ministry of Foreign Affairs of Jamaica and also, from 1 July 1983 until 9 December 1984, at United Nations Headquarters in New York.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

vs.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF WILLIAM B. COLLINS

I, William B. Collins, am competent to testify, and have personal knowledge of the following:

1. I am a Senior Assistant Attorney General for the State of Washington and represent the defendants Mike Lowry, Christine O. Gregoire, and Barbara Herman in this matter.

2. Attached to this Affidavit are true and accurate copies of Plaintiff Intertanko's Response To Defendant State Of Washington's First Set Of Interrogatories, Nos. 11, 12, 24, and 25.

I certify under penalty of perjury under the laws of the State of Washington that the above is true and correct to the best of my knowledge.

DATED this 3rd day of June, in Olympia, Washington

/s/ William B. Collins
WILLIAM B. COLLINS

Subscribed and sworn to before me this 3rd day of June, 1996.

/s/ Linda Ahmuty
NOTARY PUBLIC in and for the State of Washington.

My appointment expires: 10-10-97

* * * *

INTERROGATORY NO. 24:

Paragraph 36 of the complaint states that by "reason of the Supremacy Clause of the Constitution of the United States of America (Article VI, Clause 2) the BAP regulations are pre-empted by the federal statues and international conventions cited above." With regard to this pre-emption claim, do you claim that any BAP regulation actually conflicts with a federal statute, regulation, treaty or international convention such that compliance with both the BAP regulation and the federal statute, regulation, treaty or international convention is a physical impossibility?

ANSWER: INTERTANKO objects to interrogatory No. 24 because it requests information without reference to time period and is in other respects vague, ambiguous, and overbroad. Subject to and without waiving the foregoing objections, INTERTANKO states that paragraph 36 reflects INTERTANKO's contention that Washington State standards that are inconsistent with federal/international standards are incompatible with Article VI Clause 2 of the U.S. Constitution. This pre-emption contention does not rely on an allegation that it is a physical impossibility for tanker operators to conform to both the federal/international regimes and the Washington State regime.

* * * *

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF STANLEY J. NORMAN

STATE OF WASHINGTON)
) ss.
County of Thurston)

I. *BACKGROUND*

A. *Position*

My name is Stanley J. Norman, Commander, United States Coast Guard (retired), and member, Nautical Institute. The Nautical Institute is an international association of vessel masters dedicated to marine safety and maritime professionalism. I am a citizen of the United States, over the age of 18, and competent to provide testimony in this matter.

I am the Program Director for Policy and Planning at the Washington State Office of Marine Safety (OMS). My duties include the management and supervision of the OMS tank vessel prevention plan program, the vessel contingency plan program and the education/technical outreach program. I am also responsible for the development and implementation of agency policies and regulations and agency administrative procedures. I also serve as a custodian of the official public records for OMS. The exhibits attached to this affidavit are true and accurate copies of the documents contained in the files and library of OMS. I previously served at the Office of Marine Safety in the capacity of Senior Technical Specialist for Policy and Planning, and Tank Vessel Prevention Plan Specialist. In addition, I served as supervisor of the Puget Sound field office for the Office of Marine Safety for six months prior to assuming my current position.

B. *Education and Training*

I am a 1971 graduate of the U.S. Coast Guard Academy with majors in management and basic engineering. I am also a graduate of the Combined and Joint Staff Officer Course of the Armed Forces Staff College in Norfolk, Virginia. During my 22-year Coast Guard career, I received additional training in total quality management, personnel management, human relations, resource management, program planning, aids to

navigation, waterways management, search and rescue, and law enforcement.

C. *Experience*

My Coast Guard career included more than eight years of sea duty. I have served on five vessels. I served as executive officer or chief mate on one, and commanding officer or master of two: an ice-breaking tug, and a sea-going buoy tender. I've sailed extensively throughout the Atlantic and in parts of the Pacific Ocean. I've transited the Panama Canal, operated north of the Arctic Circle, and have extensive Great Lakes sailing time and experience with vessel management. My service ashore with the Coast Guard included program management and direction of several multi-million dollar programs.

During my assignment to high-endurance Coast Guard cutters, I supervised all deck department functions including extensive towing, replenishment at sea, maneuvering, and mooring. I was also assigned the additional duties of communications officer and assistant navigator.

In 1973 I became the Executive Officer, or chief mate, of the Coast Guard cutter Redwood in New London, Connecticut. As Executive Officer of the Redwood I was responsible for all aspects of administration, personnel, and operations of the vessel. I had the opportunity to plan and execute cargo loading, cargo storage, and liquid loading.

After four consecutive years of sea duty, I was reassigned to the Great Lakes Operations Center of the Ninth Coast Guard District in Cleveland, Ohio. In November 1975, I personally directed the search for the survivors of the ore carrier Edmond Fitzgerald, which sank in a severe Lake Superior storm.

From 1976 through 1979, I served as Senior Operations Center Duty Officer and Ice Navigation Officer for the Great Lakes. My duties included extensive vessel and boat management, as well as direct liaison with the shipping fleets that operated in the Great Lakes.

In 1979 I was selected to be the First Commanding Officer of a new icebreaker tug, the U.S. Coast Guard cutter Biscayne Bay, that was to be stationed in St. Ignace, Michigan. As First Commanding Officer, I developed, organized, and implemented a complete crew training program; developed administrative procedures for the vessel; supervised development of emergency procedures and an organization manual, as well as station bills; and accepted the vessel on behalf of the United States Government following construction.

Following graduation from the staff college in January 1982, I was reassigned to U.S. Coast Guard headquarters in Washington, D.C. as a military readiness planner.

In 1985 I returned to sea duty as Commanding Officer or master of the U.S. Coast Guard cutter Cowslip, a 180-foot, 1000-ton seagoing buoy tender responsible for aids to navigation, search and rescue, and law enforcement throughout the Chesapeake Bay, Potomac River, eastern shore of Maryland and the Virginia Capes. In 1987 I was reassigned to the staff of Commander Naval Base, Norfolk, Virginia as Senior Coast Guard Officer, where I served as assistant naval base operations officer, helping to manage the world's largest naval facility.

In 1989 I was transferred to Seattle, Washington as the Pacific Northwest Director of Waterways Management and Aids to Navigation. As program manager and director, I supervised the operations and administration of four ships,

five aids to navigation teams, two long-range radio navigation stations, and the Vessel Traffic Service of Puget Sound.

The Puget Sound Vessel Traffic Service is the United States' largest, busiest, and only international Vessel Traffic Service. As supervisor and program manager for the Vessel Traffic Service, I served as the U.S. member of the Canada-U.S. Joint Coordinating Group for Vessel Traffic Service in the Juan de Fuca region. During my tenure as program director in Seattle, my staff and the units that I supervised completed extensive waterways analysis and management surveys of all waterways in Oregon, Washington, Montana, and Idaho under federal jurisdiction. In addition, I worked extensively with the Vessel Traffic Service in Seattle to develop regulated navigation areas for Puget Sound, and the Puget Sound-specific regulations incorporated in the National Vessel Traffic Service Regulations. All of these federal regulations now reside in 33 Code of Federal Regulations (CFR).

I retired from the U.S. Coast Guard on July 1, 1993 and began work for the Office of Marine Safety on August 23, 1993.

II. *RULE ADOPTION PROCESS*

A. *Phases 1, 2, 3*

The Washington State Oil Spill Prevention and Response Act of 1991 (Act) created the Office of Marine Safety and mandated that owners or operators of tank vessels prepare and submit to OMS oil spill prevention plans for those vessels that meet the requirements of the Act. RCW 43.21I.010 and RCW 88.46.040. The Act also mandated that OMS only approve tank vessel prevention plans that demonstrated best achievable protection (BAP) for Washington's marine environment. RCW 88.46.040(3). The Office of Marine Safety approached

this challenge in three deliberate phases. Phase 1 and Phase 2 were designed to gather information on the tank vessel fleet operating in Washington, and the practices used by the owners and operators of those vessels. The phases are more fully described in Exhibit 1.

Phase 1 began with the filing of interim prevention plans by tank vessel owners and operators beginning on January 1, 1993. Interim prevention plans consisted of one to two pages which briefly described the tank vessel or vessels covered by the plan. The interim prevention plans were used to provide a picture of tank vessel traffic in Washington. From the interim plans, OMS learned that every year approximately 300 tankers and 150 tank barges operate in Washington waters.

B. *Development Process For BAPs*

In March 1993, OMS adopted Phrase 2 rules in Washington Administrative Code chapter 317-20. The order of adoption is attached as Exhibit 2. These original tank vessel prevention plan rules required owners and operators of tank vessels to submit to OMS their informational prevention plans that described the operating and management policies and procedures used by their company, and which demonstrated minimum compliance with existing federal and international standards. These detailed informational prevention plans were due for submission to OMS by September 3, 1993 or prior to the arrival of the first covered vessel in Washington waters.

Between September and December 1993, more than 70 prevention plans were submitted to OMS covering more than 500 vessels. These plans were reviewed by OMS staff for completeness and minimum compliance.

Beginning in November 1993, and continuing through April 1994, OMS conducted an extensive review of those

prevention plans. OMS researched other developments in the industry in order to produce an extensive list of current practices within the industry that held promise as potential best achievable protection standards. Industry practices and procedures were organized into four categories: Operating procedures; personnel policies; management practices; and technology.

OMS research included a very comprehensive library search and a close review of the States/British Columbia Oil Spill Task Force Reports and continuous monitoring of International Maritime Organization (IMO) subcommittee work. In particular, the efforts of the subcommittees on Safety of Navigation, Standards for Training and Watchkeeping, and Flag State Implementation were followed. OMS staff attended U.S. workgroup sessions to develop U.S. positions for IMO delegations to those subcommittees.

C. *Advisory Group*

In April 1994, OMS chartered an Advisory Group on Best Achievable Protection Standards consisting of experts on marine transportation and environmental protection. The Charter is attached as Exhibit 3. The Advisory Group was composed of representatives from both the public and private sectors. Industry representation included tanker managers, tanker operators, and other experts and professionals. I chaired the Advisory Group. A list of Advisory Group members is attached as Exhibit 4. The Advisory Group met five times to review and refine the draft best achievable protection standards and the draft rules for tank vessel prevention plans that would eventually replace chapter 317-20 WAC with a new chapter, chapter 317-21 WAC. The minutes of their meetings are attached as Exhibits 5, 6, 7, 8, and 9. An example of the draft rules which illustrates the scope of

the changes made by the Advisory Group is included as Exhibit 10.

During the process of developing and implementing the BAP standards, by agreement between OMS and the Coast Guard, I was sent to Washington, D.C. on June 25, 1994 to brief the senior staff at U.S. Coast Guard Headquarters, including representatives from the Marine Safety Office, the Navigation Office, and the Chief Counsel's Office, of the U.S. Coast Guard on best achievable protection standards that had been developed by the Advisory Group at OMS. My report of the trip is attached as Exhibit 11.

D. *Public Workshops and Hearings*

OMS conducted public workshops in July 1994, to solicit public comments on the draft best achievable protection standards. The media release and the official notice are attached as Exhibits 12 and 13. A compilation of the comments is attached as Exhibit 14. These comments were provided to the Advisory Group for their use in reviewing the draft rules for the BAP standards. The proposed rules were published in the Washington State Register on September 21, 1994. Public hearings were held in Vancouver, Washington on October 18, 1994, and in SeaTac, Washington on October 20, 1994, to obtain oral testimony on the proposed BAP rules. In addition to the testimony received at the public hearings, OMS accepted written comments through November 7, 1994. A copy of the Hearing Examiner's Report on the proposed rules is attached as Exhibit 15.

E. *Adoption of Chapter 317-21 WAC*

Chapter 317-21 WAC was adopted on December 9, 1994, after an extensive review of all comments received. *See* Exhibit 16. The rules were scheduled to become effective on June 7, 1995.

In order to facilitate compliance with these new rules, OMS developed Model Tanker and Tank Barge Prevention Plans. Because the development of these extensive model guidance documents took longer than expected, the effective date of the rules was pushed back to July 7, 1995 for tankers, and July 31, 1995 for tank barges to allow owners and operators additional time to study the models and produce better, more comprehensive prevention plans. The model plans provide templates for tank vessel owners and operators to use as they develop their prevention plans and describe the documentation required to demonstrate compliance with the rules.

F. *Amendments To BAPs In 1996*

Approximately two months after adoption of the BAP standards, in February 1995, OMS was notified by two groups that they believed there were some problems with the standards. One group was the State Board of Pilotage Commissioners, who was concerned that there may be some conflicts or some problems with clarity in those portions of the BAP standards that affected pilots. The other group was maritime labor, which had not been directly involved in the Advisory Group, although they had received mailings and other information. Maritime labor was primarily concerned over the drug and alcohol testing requirements due to possible impacts on collective bargaining agreements.

Between March and October 1995, a number of meetings were held with maritime labor, the Puget Sound Pilots, and the Board of Pilotage Commissioners in an attempt to make technical changes to the rules that would resolve the issues raised. Amendments to chapter 317-21 WAC were proposed in October 1995. *See* Exhibit 17. The notice to the public and the Hearing Examiner Report on the amendments are attached as Exhibits 18 and 19. The amendments were adopted on

January 17, 1996 and became effective on February 17, 1996. *See* Exhibit 20. The changes to the BAP standards covered three primary elements: (1) coordination with pilots, (2) voyage planning, and (3) drug and alcohol testing.

The changes to the Coordination with Pilots requirement were designed to facilitate an exchange of information and to recognize that a pre-escort conference covering many of the same items is required under 33 C.F.R. Part 168, the tanker escort rules issued by the Coast Guard pursuant to OPA 90. The changes to the Voyage Planning section added the caveat that the plan should not be adhered to without deviation; the advice of the vessel's state licensed pilot and varying local conditions must be taken into consideration. The pilot will come aboard and supplement the information that the vessel crew has already gleaned from such documents as the Coast Pilot, Tide Tables and nautical charts.

The other technical change added a section to clarify that state-licensed pilots are not subject to the alcohol and illicit drug chemical testing policies in the BAP standards because they are already covered by the State Board of Pilotage Commissioner's drug and alcohol program. The amendments also make it clear that the primary purpose for the changes in the drug and alcohol testing program was to ensure compatibility with federal standards which were being revised during the six-month period between adoption and effectiveness of the BAP standards. Those changes included specifying that post-accident testing was required of only those crew members who may have been directly involved in the accident. They also require that the name, rating, and assigned vessel of any navigation or engineering watch stander who remains employed by the owner/operator as a watch stander after testing positive for drugs or alcohol two or more times during the previous 12 months of employment

be reported to OMS. This change was at the recommendation of labor organizations, which indicated a need for some flexibility in reporting names due to privacy considerations.

In addition, the definition of "illicit drug" was changed to conform exactly with the federal definition in the testing panel used by the U.S. Coast Guard. The percentage of random testing required was amended to equal the random testing requirement in 46 C.F.R. Thus, the changes made to the BAP standards in 1996 were designed to make the standards flexible enough to take into account changes in pilot procedures as a result of State Board of Pilotage Commissioners activities and changes in drug and alcohol testing procedures due to changes in the federal drug and alcohol testing program. The State Board of Pilotage Commissioners supported the amendments. *See* Exhibit 21.

III. *EXPLANATION OF BEST ACHIEVABLE PROTECTION (BAP) STANDARDS*

Washington's Best Achievable Protection Standards are divided into four major categories: Operating Procedures, Personnel Policies, Management Practices, and Technology. Those major categories are then subdivided into subcategories and elements. The proposed list of categories and elements is included as Exhibit 22.

A. *Operating Procedures*

1. The first subcategory under Operating Procedures is **Watch Practices.** WAC 317-21-200.

a. The first element is the *Navigation Watch. See* WAC 317-21-200(1). Washington requires at least two licensed deck officers, a helmsman and a lookout. During periods of restricted visibility only, three licensed navigation officers are required. The reason for adding a licensed officer

during restricted visibility is in order to perform the three primary bridge management functions that are outlined in Bridge Resource Management. Those three functions are navigation, collision avoidance, and administration. During periods of restricted visibility the workload should be evenly distributed between those three functions.

When visibility is not restricted, an individual officer is able to combine the workload from one, two, or even three functions, depending on the area in which he or she is navigating. During restricted visibility, when a great deal more attention needs to be paid to both navigation and collision avoidance, the Advisory Group and OMS determined that an additional officer was required so that the workload could be balanced.

The primary function of a deck officer is to reduce the risk of groundings and collisions which are the two primary causes of catastrophic oil spills. Specifically, groundings are usually caused by navigational errors. Collisions are usually caused by collision avoidance errors. By assigning a deck officer to each of those functions, sufficient emphasis should be placed on each to greatly reduce the risk of a mistake.

This provision primarily affects vessels during restricted visibility in the 70 miles west of Port Angeles, in the Strait of Juan de Fuca. The Strait of Juan de Fuca is unique in that the 70 miles west of Port Angeles is entirely within Washington and U.S. waters on the inbound lane, and Canadian waters on the outbound lane. State pilots do not board vessels until they have transited for approximately five hours through state waters to Port Angeles. State pilots who board at Port Angeles count as the third officer.

b. The next element of Operating Procedures, Watch Practices, is *Bridge Resource Management. See* WAC

317-21-200(2). Bridge resource management is an internationally recognized and proven system for improving the efficiency and performance of vessel bridge teams. *See* Exhibit 23: "Bridge Resource Management" by Richard T. Johnson, National Transportation Safety Board, MITAGS *Bridge Team Management Course*, Marine Institute of Technology and Graduate Studies, October 1993, pp. 1-18 (hereinafter "MITAGS"). Washington's standards call for bridge resource management for all tankers. Included within the bridge resource management system must be provisions for accomplishment of its three functions: navigation, collision, avoidance, and administration. Washington standards for bridge resource management also include requirements for comprehensive voyage planning and coordination with pilots. These requirements are linked, just like the navigational watch composition is, to an effective bridge resource management system. The purpose of bridge resource management is to avoid collisions and groundings, the two primary causes of catastrophic oil spills.

c. The next element of Operating Procedures, Watch Practices, is *Coordination With Pilots*. *See* WAC 317-21-200(3). This element is linked directly to bridge resource management. Washington requires the use of a checklist to facilitate the communication between vessel bridge teams and pilots. When a pilot comes aboard a merchant vessel, particularly a merchant vessel with a crew that is not familiar with local waters, the pilot becomes a key member of the bridge team, providing local expertise and considerable knowledge to assist the vessel's crew in navigating the vessel safely into port. It is essential that the pilot and the vessel's navigation team work closely together. The purpose of the checklist required by Washington State is to ensure that the communication is as complete as possible between the vessel crew and the pilot and to provide redundancy in the sense that

the vessel crew needs to know the actions the pilot plans to take, and the pilot needs to know what actions the crew plans to take, so that both can support each other. *See* Exhibit 24, MITAGS Checklist and Exhibit 25, the Washington State Pilotage Rules and Checklist, WAC 296-116-205 and 2051. If an individual makes a mistake there will be additional individuals to catch that mistake and help correct it before it turns into a bigger mistake. The National Transportation Safety Board recognized the critical need for good communication between the pilot, the master and other crew members on the bridge in Safety Recommendation M-93-34, issued on June 25, 1993, following the NTSB's investigation of the grounding of the Queen Elizabeth 2 ("QE2") in Vineyard Sound, Massachusetts. A copy of that recommendation is attached as Exhibit 26.

d. The next section under Operating Procedures, Watch Practices, is *Security Rounds*. *See* WAC 317-21-200(4). OMS and Advisory Group review of Phase 2 prevention plans indicated that nearly all tanker crews made security rounds while in port. The primary purpose of the security rounds is to detect fires, flooding, and other anomalies early, so that they can be dealt with before they become major problems. The Washington standard requires a security round underway and at anchor as well as in port, every two hours, or once per watch, if a vessel has installed monitoring systems, which is fairly common. The Washington standard allows the security rounds to be conducted by any properly trained crew member. The primary focus of most security rounds it detection of small fires that can grow to be major fires. The intent related to prevention of oil spills is to reduce the likelihood that the vessel will become disabled and drift aground due to a fire. In addition, there is the possibility that a vessel can catch fire and burn to the extent that enough structural damage will be done to allow oil to escape into the

water. The primary purpose, however, is to prevent a fire or other casualty from disabling a vessel and allowing it to drift aground or lose steering and collide with another vessel.

There was a great deal of discussion at the Advisory Group about what sections of the ship should be inspected. There was some concern that having the crew member inspect in and around the cargo area would possibly subject the crew member to some danger being out on deck at night. For that reason, the Washington standard calls for the master to designate the spaces that will be inspected, relying on the master's professional judgment to determine which sections of the vessel could be safely inspected.

The Washington standard also defines the appropriate interval. Since most of the Phase 2 prevention plans indicated that the security round interval most frequently used in the industry was every four hours, OMS adopted that standard. For those few vessels without monitoring systems for flooding and fire, OMS believed that security rounds were needed more often.

e. The next section under Operating Procedures, Watch Practices, is *Anchor Watch*. *See* WAC 317-21-200(5). The Washington standard calls for a continuous anchor watch by a navigation officer on the bridge, and plotting of the vessel's position at anchor once per hour.

There is a history in Washington of problems with vessels dragging anchor. Several incidents occurred in the three years preceding the development of these standards of tank vessels dragging anchor in Port Angeles, and other types of vessels, which could include tank barges, dragging anchor in South Elliot Bay during heavy weather, and sometimes in not-so-heavy weather. In one instance in Port Angeles, when the VTS detected that the vessel was dragging anchor, they were

unable to communicate this to the vessel's crew because there was no anchor watch monitoring the ship's radio. As a result, a pilot had to be dispatched from the pilot station to board the vessel and reset the anchor. The major hazard that an anchor watch prevents is the vessel dragging anchor and subsequently colliding with another vessel or running aground. The objective of this standard is to prevent a small incident from becoming a large oil spill. The provision to plot position hourly was derived from the practices as reported by the industry in their Phase 2 informational prevention plans. As a practical matter, navigation officers monitor the position of a vessel at anchor by radar ranges and bearings on fixed objects ashore, which is relatively easy to do in a continuous manner by setting the radar up to alert the officer whenever the range parameters from a particular point ashore change more than would be expected by a vessel swinging on its anchor chain.

f. The final standard under Operating Procedures, Watch Practices, is composition of the *Engineering Watch*. *See* WAC 317-21-200(6). Many tank vessels now have a certificate for unmanned engine room operation. OPA 90 contained a provision that required the Coast Guard to do rulemaking regarding engine room manning. The Coast Guard rulemaking requires in U.S. waters that all tank vessels have a manned engine room, or manned machinery spaces. Some modern vessels are built with machinery spaces and engineering control rooms. In some cases, the engineering control room is a considerable distance away from the machinery spaces. My experience on a new Coast Guard cutter was similar. My vessel had an engine room, and motor room, and auxiliary machinery space located below decks, and a control room for all those spaces located on the main deck. The issue then is if propulsion or steering is lost, and machinery needs to be reset or adjusted to regain propulsion

or steering, can all that be done from the control room, or must some of it be done from the machinery spaces themselves?

The experience of everyone in the Advisory Group, myself included, was that there are some things that can be reset from the control room, and some things that a crew person has to be dispatched to the machinery space to reset or adjust. As a result, there can be a substantial time lag between loss of propulsion or steering, or electrical power for that matter, and the ability to regain it, because the crew member, if only assigned to the control room, must be dispatched to the machinery spaces, evaluate the situation, and make adjustments.

The Washington standard, therefore, calls for a licensed engineer in both the engineering control room and the machinery spaces, if they are located apart from each other, while the ship is engaged in critical maneuvering. Generally, those would be times of either mooring, unmooring, anchoring, leaving anchorage, or reducing speed or stopping to receive a pilot. The intent is to provide someone in each of the two spaces capable of restoring propulsion and steering as quickly as possible during these critical situations. The reason for this standard is to ensure prompt restoration of steering propulsion and electrical power in the event of a casualty. The risk if this standard is not implemented, is that the vessel will run aground or collide with another vessel as a result of a machinery casualty.

2. The next subcategory under Operating Procedures is **Navigation**. *See* WAC 317-21-205.

a. The first element under Navigation is *Fix Intervals*. *See* WAC 317-21-205(1). As a practical matter, to determine set and drift, at least two fixes are required. Then

to fix the actual progress of the vessel through the water, the fixes are measured against planned progress. The speed that the vessel should move, uninfluenced by currents and wind, is measured against the direction the vessel should move uninfluenced by currents and wind.

This particular element was the subject of much discussion by the Advisory Group. The Phase 2 prevention plans indicated fix intervals everywhere from "undefined" down to "six minutes" in some areas of Washington waters, depending on the narrow channels and traffic levels. Technology is available that allows vessel navigators to fix their position electronically almost instantly, and with very little effort. After considerable discussion, the Washington standard became constant monitoring, in the same way that there is the ability to constantly monitor at anchor to prevent groundings and collisions. There is also the ability for a vessel to monitor its position constantly while moving and to record the position, manually or electronically, at least every 15 minutes. A tanker proceeding at its normal cruise speed generally travels between 13 and 16 knots. Fifteen minutes means that the vessel will move approximately four miles in that period of time. The Advisory Group and OMS believed that a position should be plotted every 15 minutes to give an indicator to the vessel navigation team as to where they are, relative to where they plan to be. Since four miles is a considerable distance, the Advisory Group believed that 15 minutes should be a minimum interval for plotting fixes, and that fixes in some cases should be done more often. As a consequence, the constant monitoring provision was entered in the standard.

b. The next element under Operating Procedures, Navigation, is *Voyage Planning*. *See* WAC 317-21-205(2). In a manner similar to the Washington Pilot Coordination

Requirements, the Advisory Group and OMS maritime experts determined that it would be helpful to provide a checklist of items to be considered and publications to be consulted in the course of voyage planning. The checklist, like the pilot coordination checklist, is designed to facilitate the crew's accomplishment of voyage planning. It helps the crew review all of the appropriate publications and consider all the elements of a comprehensive voyage plan to provide a navigation guide through state waters for that particular voyage.

c. The next element under Operating Procedures, Navigation, is *Compass Checks*. *See* WAC 317-21-205(3). The Washington standard requires tanker masters to establish a schedule for comparison of gyro-compass and magnetic compass. A gyrocompass is an instrument that uses the rotation of the earth and inertia to indicate true direction. A magnetic compass indicates direction based on the location of the earth's magnetic poles. A comparison of the two compasses is generally the method used to determine gyro-compass and magnetic compass errors and then those errors are applied to the two compasses to ensure an accurate reading on both and to avoid faulty steering. The compass comparison method was the method referred to most frequently in the Phase 2 prevention plans as the method used to determine compass error on vessels.

d. The next element of Operating Procedures, Navigation, is *Port Angeles* tug assist. *See* WAC 317-21-205(4). This element was not challenged in this lawsuit. This element codifies an existing voluntary procedure developed to provide assist tugs to vessels anchoring and departing anchorage in Port Angeles. The reason for this element is that the anchorage area is heavily used and subject to high winds. This element is also based on the incident described earlier for

anchor watch. There was a need to add some additional capability to vessels trying to operate at slow speeds, maneuver among other vessels, and also remain anchored when the wind speed picked up.

3. The next subcategory under Operating Procedures is **Engineering**. *See* WAC 317-21-210.

a. The first element under engineering addresses *standby electrical generators*. *See* WAC 317-21-210(1). Electrical power on a vessel is extremely critical. Most of the navigation equipment and other electronic devices operate from the electrical power generated in the machinery spaces by what is called a ship service generator. Most vessels are equipped with more than one. Most modern vessels have an automatic switching gear, which is essentially a circuit breaker. When the generator being used fails, the switching gear automatically activates another generator and maintains electrical power. With this system, very little time is lost in regaining electrical power in the event of a failure of the primary generator. However, some vessels do not have this automatic standby switching gear. The Washington standard is designed to ensure that in the event a vessel does not have automatic standby switching gear, the standby generator is running and immediately available to assume the electrical load and thereby restore electrical power as quickly as possible. Frequently, the loss of electrical power also results in the loss of propulsion. Thus, restoration of electrical power quickly is critical to maintaining control of the vessel.

b. The second element under Operating Procedures, Engineering, is *steering gear inspections*. *See* WAC 317-21-210(2). The state requirement is for hourly inspections of the steering gear while in state waters. The steering "flat" is the room on a ship where the steering gear is located. The purpose of this requirement is to ensure that the steering gear

continues to work as it did when it was inspected and tested 12 hours before entering Washington waters. The Advisory Group believed and the OMS research indicated that steering gear could fail between 12 hours outside state waters and arrival at a safe mooring. These inspections of the steering gear are designed to highlight or identify small problems before they become major problems and control of the direction of the vessel is lost.

There is a provision in the standard for a monitoring system. If a company chooses to install an adequate monitoring system, the requirement is waived for hourly inspections by personnel. Generally, the hourly inspections of the steering gear that were indicated in the Phase 2 prevention plan as a practice by the industry were conducted as part of a routine survey of all machinery and auxiliary machinery spaces by engineering personnel.

c. The third element under Operating Procedures, Engineering, is *scoop injection systems*. *See* WAC 317-21-210(3). This element was added in the unlikely event that tankers coming into Washington waters would use scoop injection systems. The reason it's unlikely that tankers will have scoop injection systems is that this is a passive system of machinery cooling that only works on high speed vessels, and very few tankers operate at speeds high enough to make this efficient. A scoop injection system is more efficient and effective than pumping cooling seawater for use in the main propulsion system. The way it works is a scoop, essentially like an air scoop in a vehicle, located below the water line of a vessel traveling at 20 knots or more, will allow for the intake of cold saltwater. Due to the speed of the vessel, the cooling water is forced into the engineering system and back out without the sustained assistance of pumps.

The state requirement is that these systems be secured or turned off before entering state waters and that instead the vessel use its installed pumps to provide cooling water to its propulsion system and to its electrical generating systems. The reason for this provision is that if a ship does have a scoop injection system, it does not function properly at the lower speeds normally used in coastal waters. Most systems will fail if adequate cooling water is not supplied. The requirement is designed to prevent failure in the propulsion and electrical generating systems, thus reducing the risk of accidents.

d. The final Operating Procedure, Engineering, element is *main engine fuel changeover*. *See* WAC 317-21-210(4). It has become a common practice on some vessels to use a heavier, less refined fuel when out at sea, and a more expensive, lighter refined product when maneuvering. In California, for many vessels the lighter refined product is required to meet air emission requirements. That is, in California waters, vessels will switch to a more refined, lighter product or oil in order to reduce the sulfur emissions that generally result from burning heavier fuel oil. OMS discovered, and Advisory Group members confirmed, that frequently during the process of changing from heavy fuel oil to light fuel oil, propulsion is lost due to malfunctions within the propulsion system. In order to prevent the loss of propulsion within state waters where vessels have less room to maneuver, the requirement in the BAP standards is that if a vessel uses this system, the switchover must take place outside of state waters.

While the Advisory Group was meeting, a cargo vessel in the Mississippi River near New Orleans switched from heavy to light fuel, lost propulsion, and experienced a casualty. This incident confirmed our concern that this fuel changeover was an engineering procedure that should best be conducted in an

area where loss of propulsion would not have a detrimental effect on the vessel or result in a grounding or collision.

4. The next subcategory under Operating Procedures is **Prearrival Tests And Inspections.** *See* WAC 317-21-215. The Washington standard defines critical navigation and engineering equipment subsystems that should be tested. A subsystem failure may result in a failure of the main propulsion system, the electrical generating system, or the steering system. The subsystems included are main lubrication oil pumps, main fuel oil pumps, oil system strainers, settler and service tanks, cooling water systems, including pumps, intake air blowers, and air control systems. For steam vessels, spare boiler burners, forced draft fans, and feed water pumps are added. Thus, the state requirement further defines main propulsion system checks and inspections and adds navigation equipment. Prearrival tests and inspections elements and items were drawn primarily from expert engineers provided by ARCO Marine and American President Lines. Like nearly all of the operating procedures, these standards are designed to prevent collisions and groundings, and subsequent oil spills.

5. The final subcategory under Operating Procedures is **Emergency Procedures**. *See* WAC 317-21-220. Station bills are required for fire, abandon ship, man overboard, and oil spill response. A station bill is a listing of all personnel on the vessel, where they would go in each of these emergencies, what they should bring with them, and what their action is to be in response to the emergency. Station bills are generally very comprehensive. Based on written procedures submitted as part of the Phase 2 prevention plans by virtually all major companies, the state standard also includes a requirement for written procedures on how to respond to collisions, groundings, hull breach or structural failure, loss of propulsion, loss of steering, loss of electrical power, or

compass malfunction. In addition, the state standard adds written preparation procedures for three other potential situations: (1) emergency towing, (2) loss of throttle control on the bridge, and (3) heavy weather. These procedures were outlined in the Phase 2 prevention plans as situations in which a written procedure needed to be promulgated and developed in order to tell the crew how to handle the potential situation. Written procedures help vessel crews avoid groundings and collisions. They also help the crew mitigate the damage if a grounding or collision does occur.

6. An additional subcategory within Operating Procedures is entitled **Events**. *See* WAC 317-21-225. This subcategory requires vessels that experience an event to maintain the documentation that would be required to investigate that event. The documentation surrounding an event must be safeguarded so that investigators will be able to reconstruct the event, and promulgate "lessons learned" through prevention and safety advisory bulletins.

B. ***Personnel Policies***

The next major category of BAP standards is Personnel Policies.

1. The first subcategory within Personnel Policies is **Training.** *See* WAC 317-21-230. Sixty-five (65%) to eighty percent (80%) or more of all vessel accidents and casualties are caused by human error. *See* Exhibit 27. Therefore, the personnel policies standards promulgated by the state of Washington are critical to preventing oil spills. A study done by the National Ports and Waterways Institute at the beginning of the Advisory Group process identified training as the single most critical subcategory that should be addressed.

The training program required by Washington includes three primary elements. They are (1) orientation training for

all new crew members, (2) position-specific training for all crew members, and (3) refresher training for crew members to validate the position-specific training received previously. In addition, shipboard drills or practices are also included under training, since they are a vital part of a comprehensive training program. Drills allow the crew to actually practice the procedures they have been trained for. An example of a Phase 2 Training Plan from SeaRiver Maritime, Inc., is attached as Exhibit 28. The Phase 2 Training Outline of Stolt-Nielson, Inc. is attached as Exhibit 29.

a. The state standard for *vessel orientation training* includes all new crew members or all members returning to vessels of a type they have not served on within the past year. *See* WAC 317-21-230(2). It also includes maintenance personnel who sail on ships, because the orientation requirements are principally safety-oriented. The orientation training includes familiarization with the individual crew member's station assignments and responsibilities, including both emergency responsibilities and routine responsibilities. It also includes a walking tour of the spaces on the vessel that are designated by the master. The purpose of the walking tour is to familiarize the new crew member with the vessel's layout, as well as to identify escape routes for the new crew member from the place where he or she sleeps, and from the place where he or she works.

b. *Position-specific training requirements* are laid out in the state standard by each primary position on a vessel. Companies have been given three years to comply with this requirement. This means that an individual employed on a vessel on June 7, 1995, needs to complete the training specific to their position by June 6, 1998. Crew members subsequently employed have three years from the date of their employment to complete this training.

The state standard consolidates international and federal standards and adds shipboard management training, bridge resource management training, and automated radar plotting aids (or "ARPA") training for selected officers. The shipboard management training requirement applies only to senior officers: the two senior engineers and the master and chief mate. The purpose of this training is to improve communication and human resource management. This training will be required at the international level in order to be in compliance with the International Safety Management (ISM) Code that takes effect in 1998. State, federal, and international authorities are encouraging ship owners and operators to immediately start working toward certification under that code.

Bridge resource management training supports the requirement for the bridge resource management operating procedure. The procedure is to improve bridge communication and thus reduce the risk of collisions and groundings.

ARPA training (Automated Radar Plotting Aid Training) is required in the 1995 Standards for Training, Certification and Watchkeeping for Seafarers (STCW) Amendments for all vessels equipped with ARPA. Under international standards, all tankers except the very smallest tankers are required to have ARPA. During the review of the Phase 3 prevention plans that have been received to date, it has become apparent that there is only one tanker that routinely operates in Washington that is small enough to fall below the international requirement for ARPA. We are working with that company to determine a method by which they can have an alternative compliance system.

The state standard requires a training program that clearly illustrates the method of training, the qualifications of

instructors, the length and location of the instruction, and the method used to evaluate student performance at the end of the course. This is completely consistent with the training quality control provisions of the 1995 STCW Convention Amendments.

c. The third primary element of a comprehensive training program is *refresher training*. The state standard for refresher training is derived directly from the STCW and the federal requirement for license renewal or mariner document renewal every five years. Thus, the refresher training is timed to coincide or just precede the application by the mariner for a document renewal and ensures that the officers and crew stay current in their position-specific skills.

d. The final element under training is *shipboard drills*. This element is linked directly to the requirement for emergency procedures under the operating procedures category of the BAP standards, because drills are necessary to build competence in applying procedures during an emergency. The Washington State standard applies the U.S. federal standard to foreign vessels, increasing the frequency of fire drills from monthly to weekly. The reasoning behind this is that foreign tank vessels pose the same amount of risk to Washington waters at U.S. tank vessels. To coincide with the element on required emergency procedures, loss of propulsion drills, loss of electrical power drills, emergency towing, and man overboard are required quarterly drills.

2. The second subcategory within Personnel Policies is **Illicit Drugs and Alcohol**. *See* WAC 317-21-230. The state standard requires all companies to establish a testing program consistent with the U.S. testing program in 33 C.F.R. Part 95 and 46 C.F.R. Parts 4 and 16. The federal standard for drug and alcohol testing requires random drug tests, pre-employment drug tests, and probable cause/post-incident drug

and alcohol tests for U.S. Mariners in safety sensitive positions. The Washington standard includes random alcohol tests and applies the federal standard plus the Washington standard to all crew members on all covered vessels. Essentially, Washington has a "zero tolerance policy" for the use of illicit drugs or alcohol while a tanker is operating in Washington waters.

The purpose of an illicit drug and alcohol testing program is to prevent the use of drugs and alcohol, thereby preventing crew members from being intoxicated from the use of those substances and being unable to properly perform their duties. The state drug and alcohol testing regime is based primarily on SeaRiver Maritime's program as presented by the SeaRiver representative on the Advisory Group.

3. The next subcategory within Personnel Policies is **Personnel Evaluations**. *See* WAC 317-21-240. This subcategory includes two elements: fitness for duty and performance review.

a. Washington requires vessel officers to monitor each crew member's fitness for duty and to replace watch standers who are unfit to stand watch due to illness or other factors in order to maintain competent performance of all duties.

b. The next element is performance reviews for permanent crew members. Washington requires performance feedback for all personnel in order to promote improvement of performance in the future. The performance review element also requires a list of additional training needs identified during performance review. Thus, another linkage in the standards is between performance review and training requirements.

4. The next subcategory within Personnel Policies is **Work Hours**. *See* WAC 317-21-245. The federal standard for work hour limitations on tankers as contained in 46 U.S.C. pursuant to OPA 90, is crew members may work no more than 15 hours in 24 hours, or 36 hours in 72 hours, including administrative duties, except in an emergency. In addition, a licensed deck officer may not assume navigational watch duties when departing a U.S. port unless he or she has been off duty at least six hours of the 12 hours prior to departure. The purpose of this requirement is to help ensure peak performance and eliminate the risk of accidents due to fatigue.

The Washington standard applies the U.S. standard to all tank vessels. The logic behind doing this is that foreign flag vessels pose the same level of risk to Washington waters as U.S. flag vessels.

5. The next subcategory within Personnel Policies is **Language**. *See* WAC 317-21-250. The Washington standard requires persons in charge of navigation watches and oil transfers to communicate effectively in English in order to safely accomplish their assigned duties. As a practical matter, all deck officers are already required to speak some English. Engineering officers who are in charge of bunkering (vessel refueling) should also be able to communicate effectively in English. In addition, the Washington standard highlights the need for multi-national crews to be able to communicate with each other in a common language.

The rationale for this rule is to improve the English language communication by critical vessel personnel, particularly those who are navigating the vessel through the 70 miles from the entrance to the Strait of Juan de Fuca to Port Angeles, before an English speaking state-licensed pilot boards the vessel. English language proficiency for

engineering officers involved in bunkering is also critical to avoid operational oil spills during refueling.

All multi-national tanker crews are required to use a common language and the manuals and other written instructions are to be printed in the common language used aboard the vessel.

6. The next subcategory within Personnel Policies is **Recordkeeping**. *See* WAC 317-21-255. Recordkeeping contains two elements: training records and work hour records. This subcategory is included to ensure that documentation is available to confirm that required training is accomplished and hours worked do not exceed the limitations.

C. *Management Practices*

1. *Management oversight* is a critical part of any safety and environment protection management program. *See* WAC 317-21-260(1). It was highlighted separately to ensure that while a company is obtaining certification for its management system, owners and operators are actively monitoring vessel operations, personnel training, technological advancements and management practices.

2. The next element is the *management program. See* WAC 317-21-260(2), (3). Tanker owners and operators must implement a safety and environmental protection management system. The Washington standard requires that all tankers be certified, along with the operating company for those ships, according to either the International Safety Management (ISM) Code or a comparable code, or it can be done internally. The Washington standard lists the comparable codes as the International Ship Managers Association Code of Ship Management, Det Norske Veritas Safety and Environmental Protection Management System and Lloyd's Register Quality Management System.

If a company chooses to implement an internal management program, it must contain a policy statement from the company's chief executive officer that commits the company to assuring personal safety and prevention of pollution; an organizational scheme that facilitates communication; weekly shipboard safety meetings; an accident and pollution incident review and analysis program; and a performance measurement system to evaluate progress towards the safety and pollution prevention goals established in the company policy statement.

In addition, in order to ensure quality control of the certification process, Washington requires that external audits be performed by a member of the International Association of Classification Societies or IACS. Washington allows companies to submit a prevention plan that indicates that they are working on their certification under one of the listed codes with a completion date of no later than July 1998, which is IMO's completion date for certification under the ISM Code.

3. Like management oversight, *vessel visitation* is a critical element of any management program, but in the interim time period while companies are being certified, OMS and the Advisory Group believed it was important to list this separately, so that it does not get overlooked. The Washington standard, which is derived from a review of Phase 2 prevention plans, requires vessels to be visited at least quarterly by company managers. The purpose of these visits is to give the senior officers on board the vessel an opportunity to highlight problems for management and to give management an opportunity to discuss procedures and issues with senior officers on vessels.

4. The final element of management is *preventative maintenance*. There are two parts of this element. Washington standards call for a preventative maintenance system for

covered vessels, which includes planned maintenance, annual inspections of major equipment and a supporting supply system to ensure that spare parts necessary to keep vessel equipment operational are available. In addition, it requires a critical area inspection program similar to that required for U.S. tankers in the Trans-Alaska Pipeline System (TAPS) trade. The critical area inspection program is very similar to the IACS enhanced hull survey program.

The objective is to identify critical areas of the vessel's hull and piping systems that are prone to corrison or cracking, and to deal with those areas through more frequent inspections, thickness measurements, and an enhanced corrosion program. The Washington standard supports introduction of an inspection standard for all critical structural portions of the vessel.

All of the elements in the management category are designed to break the chain of human errors that could endanger a ship due to grounding or collision, or due to structural failure. Management elements address factors that vessel crews are not able to resolve without company support.

* * * *

IV. *RECORD OF ACTUAL COMPLIANCE WITH BAPs*

OMS has witnessed excellent compliance with its prevention plan and BAP standard requirements in chapter 317-21 WAC, having received over 70 plans from tank vessel owners and operators covering fleets of vessels from one to over 40. *See* Exhibits 30 and 31. A copy of a Phase 3 Plan is attached at Exhibit 32. Many of these plans are from Intertanko members who have complied with the requirement to submit them and many have been found complete, meaning that each BAP standard has been addressed and documentation demonstrating compliance has been provided by these vessel

owners or operators. OMS is in the process of reviewing the compliance documentation for each plan. OMS has employed a very liberal and common sense waiver policy to facilitate and encourage industry compliance with the BAP standards. Single voyage waivers, commonly known in the industry as "Silver Bullet" waivers, have been granted to companies who have claimed ignorance of the prevention plan requirement or have been unable to complete their plan before a vessel covered by the plan arrived in Washington waters. Silver Bullet waivers were granted throughout the Phase 2 plan period (9/93 - 12/94) and continue to be granted in Phase 3.

In addition, OMS has granted many long-term (up to five years) waivers for tank vessels carrying non-petroleum products such as molasses, tallow, and chemicals. OMS has also granted waivers for specific plan elements for good cause, such as conflicts with local laws or existing collective bargaining agreements. OMS has handled all waiver requests consistently and fairly to help ensure a level playing field between competitors.

V. *TANKER ROUTES THROUGH WASHINGTON WATERS*

Most tanker traffic in Washington is through Puget Sound. There is limited tanker traffic in the Columbia River, but there is considerable tank barge traffic in the river. The route of tanker traffic can be followed on Chart 18400, entitled "Strait of Georgia and Strait of Juan de Fuca". *See* Exhibit 33. Tanker traffic generally follows the west coast of Vancouver Island when it's arriving from Alaska, or follows what is called a great circle route, if it's coming from the Pacific Rim. It will arrive in the vessel traffic separation scheme in the vicinity of Swiftsure Bank, which is at the lower left end of Chart 18400. The vessel traffic system is very much like a divided highway, with the magenta, or

purple, area on the chart indicating the separation zone, which is like a median divider, and traffic lanes being indicated by additional purple dashed lines. Tanker traffic would normally follow the in-bound lane, indicted just south of Swiftsure Bank on the chart, where the arrow points to the right or east. As a tanker continues east, it passes through a precautionary area. It is still under the management of Tofino Vessel Traffic Service at this time. As it passes Buoy J or Buoy Juliet, and enters Washington waters, it passes to the control of Vessel Traffic Service Puget Sound in Seattle, WA.

The traffic lanes at this point pass relatively close to such hazards as Duntz Rock and Cape Flattery, and Neah Bay. Continuing southeast in the inbound traffic lane, the tanker will stay on the same heading for approximately three hours, and then just past longitude 124 west, the vessel will come to a turn to the left to take it almost due east. This area is the site of the grounding of the Matsukaze in 1988. A mate on that inbound Japanese tanker fell asleep, did not make the turn, and the vessel simply steered straight into the beach at Crescent Bay while the mate slept, in spite of Vessel Traffic Service (VTS) warnings. VTS has established a call-in point at the turn, but nonetheless, if a mate is alone on the bridge and is asleep, the call-in point will not prevent future incidents such as the Matsukaze grounding. The OMS requirement for three deck officers while in state waters in restricted visibility will eliminate the possibility of a fatigued officer acting independently and a vessel on auto-pilot going right through a turn and having an accident such as a grounding or a collision.

Continuing east, tankers pass Crescent Bay, to the area between Port Angeles and Victoria. After passing Buoy VF (the names of buoys are provided in quotation marks next to the symbol for buoy on the chart), VF is due south of Race

Rocks, which lies at the southernmost point of Vancouver Island, southwest of Victoria, B.C. At Buoy VF, a tanker enters another precautionary area and turns south, to pick up a pilot at Port Angeles, WA. The pilot is picked up just north and east of the Port Angeles Harbor. The tanker then proceeds toward Buoy R, if it is headed for one of the four refineries in the North Sound, or heads for Buoy S, if it is going to transit Puget Sound southbound to Tacoma, where two additional refineries are located.

After about an hour, the tanker will pick up its escort off New Dungeness. The escort will stay with the tanker until it is moored at the refinery. As the chart illustrates, the tanker has transited 70 miles without a pilot, and almost 85 miles without an escort.

Tankers bound for the northern refineries proceed up the inbound traffic lane past Buoy R. The next buoy is Buoy RA. Buoy RA lies between Hein Bank and Smith Island. At this point, the waterways become narrower and more congested. The area around Hein Bank is one of the most favored fishing grounds in all of Puget Sound. The tanker continues to the northeast, shoots the gap between Davidson Rock and Lawson Reef, where obstacles lie just outside the traffic lanes. A steering casualty or loss of propulsion during the rest of the transit is especially serious. At this point, the vessel beings to turn north and enter Rosario Strait.

As illustrated on the chart, Rosario Strait has no traffic lanes. It is too narrow for traffic lanes. As a result, one-way traffic for tankers is imposed in this area. If a tanker is outbound in Rosario Strait, an inbound tanker will not be allowed to enter Rosario Strait. If the tanker is bound for one of the two Anacortes refineries, it will proceed up to the vicinity of Shannon Point, turn right, pass through a very narrow channel called Guemes Channel, and proceed into

Padilla Bay, where the refineries are located. This area, Guemes Channel, has been identified in the OPA 90 planning process as the worst case scenario oil spill in the Captain of the Port Puget Sound area. The currents in Guemes Channel are extremely strong, and in addition, the area is subject to frequent fog and a significant range of tides.

If the tanker is not bound for the Anacortes refineries, but instead to the Cherry Point and Ferndale refineries, it will continue all the way through Rosario Strait, passing by such obstacles and obstructions as Peapod Rocks and Lummi Rocks. Those refineries are located to the east, or to the right, of Alden Bank, at the north end of Rasario Strait, in the Strait of Georgia, at the center right of Chart 18400.

In the case of tankers bound for the four northern refineries of Washington, the most hazardous area from a navigational and congestion standpoint is Rosario Strait. For tankers bound for Canada, the most hazardous area is the U.S. waters of Haro Strait and Boundary Pass, also from both a navigational difficulty and congestion standpoint. For tankers bound south through Puget Sound, congestion is the biggest problem. There is less navigational difficulty, although the run is longer. For all tankers inbound through the Strait of Juan de Fuca, the problem area is the western end of the strait, where the vessels have neither pilots nor escorts while they transit an area which is not particularly difficult from a navigational viewpoint, but has persistent fog and is heavily fished, causing congestion problems. English language communication difficulties are also severe in the area west of Port Angeles, the area transited before the State Pilot boards. Vessel deck watch officers with limited English speaking capability have trouble communicating in this area with the Vessel Traffic Service system, as well as with other vessels

when they are required to talk to them to arrange a safe passage in collision avoidance situations.

Tankers southbound through Puget Sound to Tacoma transit broader waterways that are frequently more congested than the ones going north toward Anacortes or Cherry Point refineries. Chart 18440, entitled "Puget Sound" is attached as Exhibit 34. Tankers have a longer transit going south. From the pilot station at Port Angeles to the pier at Tacoma is approximately an eight-hour run for the average tanker. The transit south to Tacoma is made more difficult by crossing traffic, particularly ferries crossing the traffic lanes on east-west routes, and the proximity of obstructions close to the western side of the southbound traffic lane.

In summary, the Puget Sound area is considerably more difficult to navigate than Prince William Sound where the Exxon Valdez disaster occurred. The Valdez Narrows is the only navigationally challenging area in Prince William Sound. The remainder of the transit through Prince William Sound is uncomplicated and not subject to the congestion, the persistent fog, and the proximity of obstructions such as is present in Washington waters.

VI. *POTENTIAL INCREASE IN FOREIGN TANKER TRAFFIC*

On April 28, 1996, President Clinton signed a determination that the lifting of the ban on the export of Alaska North Slope crude oil was in the national interest. *See* Exhibit 35. As a result, the transportation for export of Alaska North Slope crude oil will be permitted on U.S. flag ships. This is the first time that Alaskan oil has been transported anywhere but to the United States or U.S. territories.

OMS is unaware of any projected decline in the refining capacity or production at the six Washington refineries.

Normally, very nearly all of their oil is from the Alaska North Slope. Occasional loads come from places like Venezuela, but primarily the crude oil for Washington's refineries has come from Alaska.

The Jones Act requires that U.S. flag vessels carry oil from Alaska to other United States ports, including Washington ports. If Alaskan oil is diverted due to export, then there is an increased possibility that foreign oil will be imported to Washington to keep the refineries operating at capacity and to make up the difference if enough Alaska North Slope oil is exported. This foreign oil will come in on foreign tankers. Foreign tankers are, in my opinion, inherently less safe transiting Washington waters than U.S. flag tankers.

The basis for my opinion is that up to 80 percent of marine accidents are caused by human error. (Refer to Exhibit 27.) Generally, U.S. seamen are subject to more stringent human factor requirements than the crews of foreign vessels. These include OPA 90 work-hour restrictions and more stringent training regimes. In addition, there is an inherent language difficulty for non-English speaking or limited English-speaking crews. Language difficulties have been a critical factor in several near misses and incidents in the Strait of Juan de Fuca, particularly west of Port Angeles, prior to the arrival of a state-licensed pilot on-board the vessel. These incidents have been recorded by the U.S. Coast Guard Vessel Traffic Service in Seattle, as well as the Canadian Coast Guard Vessel Traffic Services in Tofino and Vancouver, B.C. In fact, a language difficulty form is used by the Vessel Traffic Service to identify vessels on which the crews have difficulty communicating in English.

During my Coast Guard career, I was directly involved in the development of these procedures to address language difficulties. OMS is concerned that the potential for additional

foreign tanker traffic will only exacerbate a situation in which more and more vessel crews are transiting Washington waters with limited or nonexistent English-speaking skills. This situation has had a severe impact in the past and will continue to have a severe impact on the safety of navigation, particularly in the western end of the Strait of Juan de Fuca.

The trend toward foreign flag vessels is also evident in the non-tank vessels. This is due to the decline in the U.S. Merchant Marine.

VII. *RECENT OIL POLLUTION HISTORY IN WASHINGTON WATERS*

The BAP standards were not developed to address a hypothetical situation. They were developed to address near misses and spills that have occurred in Washington during the last decade and to implement measures that will help reduce the risk of those incidents and spills occurring in the future. In March 1984, the tanker Mobil Oil grounded on a rock in the Columbia River, resulting in a 200,000 gallon oil spill. In December 1984, the tanker ARCO Anchorage grounded in Port Angeles Harbor and spilled 239,000 gallons of Alaskan crude oil. In April 1988, the tanker Matsukaze grounded at Crescent Bay, west of Port Angeles, causing extensive damage to the vessel, but fortunately no oil spillage. In April 1989, the tanker Exxon Philadelphia lost power and drifted off the mouth of the Strait of Juan de Fuca with a load of 23,000,000 gallons of Alaskan crude oil. It took approximately five hours for a tug to reach the tanker, which was eventually towed to Port Angeles. In September 1989, the tanker Exxon San Francisco lost power while outbound in the Strait of Juan de Fuca. That vessel also was returned under tow to Port Angeles. In October 1990, the tanker Contessa flooded at sea during inclement weather. The master jettisoned 81,000 gallons of oil to stay afloat. This incident occurred off

the mouth of the Columbia River. In June 1991, the tanker ARCO Texas ran aground at Ediz Hook in Port Angeles. Fortunately, no oil spill occurred from that casualty. The above incidents are more fully described in Exhibit 36, the list of vessel casualties described in the Final Report of the Emergency Towing System Task Force. A map of major oil spills in Washington waters which have occurred prior to November 1991 is attached at Exhibit 37.

There have also been several major tank barge spills, including one after the implementation of the BAP standards, in which it was determined that if the master had been following the company procedures established in compliance with BAP standards, the grounding and spill of Crowley Barge 101 would not have occurred.

I have read the foregoing Affidavit and declare it to be true and correct to the best of my knowledge, information and belief.

DATED this 3rd day of June, 1996.

/s/ Stanley J. Norman
STANLEY J. NORMAN

Signed or attested before me, *Christene E. Winkelman* by *Stanley J. Norman*.

DATED this 3rd day of June, 1996.

/s/ Christine E. Winkelman
NOTARY PUBLIC, in and for the
State of Washington.
My commission expires on: 6-30-97

EXHIBIT 11

STATE OF WASHINGTON

OFFICE OF MARINE SAFETY

June 27, 1994

TO: Management Team

FROM: Stan

SUBJECT: COAST GUARD HEADQUARTERS TRIP REPORT

1. I attended the U.S. Working Group Meeting on Standards for Training and Watchkeeping on June 24, 1994, and briefed Coast Guard officials on Tank Vessel Best Achievable Protection (BAP) standards on June 25, 1994. Dr. Jack Harrald attended both meetings with me.

2. Overall, the trip was worthwhile and successful. We are definitely on target with the BAP standards. Following the meetings, Jack and I met with Captain Basel of the Coast Guard and agreed that we are approximately 3-5 years of the Coast Guard, and consequently, the international community. The Coast Guard does not intend to oppose our rulemaking, but to observe and learn, as they will be introducing similar federal standards in the next couple of years.

* * * *

EXHIBIT 15

STATE OF WASHINGTON

OFFICE OF MARINE SAFETY

December 1, 1994

TO: Barbara Herman, Director

FROM: Bruce Sutherland, Policy & Planning Program Director

SUBJECT: HEARING EXAMINER'S REPORT ON PROPOSED TANK VESSEL OIL SPILL PREVENTION PLAN RULES (WAC 317-21)

1. The proposed rules for Tank Vessel Best Achievable Protection Oil Spill Prevention Plans were published in the State Register on September 21, 1994. Two Public Hearings were held and written comments were accepted through November 7, 1994. The Public Hearings were held in Vancouver, Washington on October 18, 1994, and in Seatac, Washington, on October 20, 1994. Both hearings were held in the evening to encourage attendance and participation.

2. These rules are the result of more than one year of effort by Office of Marine Safety (OMS) staff and the Tank Vessel Best Achievable Protection (BAP) Advisory Group. In November and December 1993, OMS staffreviewed more than seventy comprehensive oil spill prevention plans submitted by tank vessel owners and operators. Model procedures and practices were taken from the plans and presented to the Advisory Group as a working draft. The Advisory Group was composed of representatives from the private and public sectors. Industry representation included tanker managers, tanker operators and tank barge operators.

The Advisory Group met three times to develop the BAP standards and established sub-groups of subject matter experts to address complex issues such as training, work hours, and engineering procedures. OMS staff then converted the BAP standards to draft rules. The Advisory Group met two additional times to thoroughly review the draft rules before they were published as proposed rules. With very few exceptions, which are noted in the specific comments by Advisory Group members in paragraph 6 of this report, these rules are the unanimous recommendations of this Advisory Group representing the industry, the environmental community, and government.

* * * *

c. AWO, BP, Captains Prabhu and Dadlani, Foss Maritime, PSSOA, TI, and WSPA Comment: The proposed rules duplicate many international and federal standards.

Friends of the Earth, Northwest Indian Fisheries Commission and SeaRiver Comment: Redundant regulations are necessary to protect the marine environment and enforce international standards. The rules are workable as proposed.

OMS Response: While many sections of the rules appear to duplicate international and federal standards, they are in fact different in small but significant ways. For example, work hour restrictions for tanker personnel are identical to the federal restrictions but apply to all tankers in Washington waters, not just U.S. flag tankers. Another example is tanker position fix interval. International standards require position to be determined "frequently". The proposed rules require constant monitoring of position and recording of position at least every 15 minutes while in Washington waters. Thus, the rules have defined "frequently" for Washington state. To the

extent federal rules are adopted, it is an effort to bring consistency to the federal and state regulatory regimes, a goal encouraged by industry since OMS' creation.

* * * *

d. PSSOA, Texaco, and WSPA Comment: The policies, procedures and practices of one company should not be adopted and required industry-wide due to the wide variety of management systems in use in the industry.

OMS Response: The BAP Standards do not represent the policies of any one company. The rules are general in nature and represent internationally recognized and recommended practices in most cases. The rules codify and clarify practices developed and recommended by the industry that are current practices of many companies.

* * * *

(2) Illicit Drugs and Alcohol Use

(a) Test program

ARCO, BP, INTERTANKO, and TI Comment: OMS should adopt federal test standards and not create its own.

WCS Comment: Pre-employment alcohol testing may have limited value.

National Audubon Society and People for Puget Sound Comment: Zero tolerance policy and all measures necessary to ensure compliance are strongly endorsed.

OMS Response: The rules only differ from the federal testing regime in one respect: pre-employment and random alcohol use testing are required. This requirement was included at the request of the Advisory Group which adopted a zero tolerance policy for drug and alcohol use on board tank vessels in

Washington waters. Companies that have conducted pre-employment alcohol testing in the past report that there have been a number of positive tests which have acted as an effective screening tool for hiring.

* * * *

(5) Language

INTERTANKO Comment: Current international requirements for English proficiency are adequate.

BP Comment: Not all deck officers need to be proficient in English.

National Audubon Society, People for Puget Sound, and Washington Environmental Council Comment: Strongly support the proposed rules which clearly identify the persons on foreign vessels that must be proficient in English.

OMS Response: The International Convention on Standards for Training, Certification, and Watchkeeping for Seafarers (STCW) requires all deck officers to be reasonably proficient in English. OMS English proficiency requirements are consistent with the STCW.

EXHIBIT 27

US. Department of Transportation

United States Coast Guard

PREVENTION THROUGH PEOPLE

The Coast Guard announces the establishment of a task group formed by the Chief, Office of Marine Safety, Security and Environmental Protection to assess how to improve safety and pollution prevention through improvements in areas where people are the major factor in accidents. The task group's purpose will be to develop a long-term strategy for a Coast Guard "Prevention Through People" program which stresses solutions outside the regulatory process.

The analyses of marine casualties which have occurred over the past 30 years have prompted the safety regime of the international maritime community to evolve from one based primarily upon technical requirements, to one which recognizes the importance of the human element in the system. This analyses indicates that 65 to 80 percent of casualties are caused by people. However, the maritime safety and pollution prevention programs spend 80 percent of the available resources addressing design requirements and technical "fixes" to eliminate the "human element" or to provide redundancy and alarms which can actually result in the need for increased technical skills of the operating personnel. Only 20 percent of our resources are expended on people issues. Consequently, rebalancing is necessary to better address the root causes of safety and pollution problems or to address them properly at an adequate level while refocusing the saved resources in other areas.

Historically, the international maritime community has approached maritime safety from a predominantly technical

perspective. The conventional wisdom was to apply engineering and technological solutions to promote safety and minimize the consequences of marine casualties. Accordingly, international standards have addressed equipment requirements such as the type and amount of lifesaving and firefighting apparatus required on board. Design requirements such as protectively located segregated ballast tanks, double hulls, and improved steering gear standards have been adopted to make the operation of tankers safer and to minimize the extent of pollution in the event of a casualty. Innovations in structural fire protection engineering have significantly improved the fire safety of today's modern cruise vessels. State-of-the-art electronics have had a profound effect on the accuracy of navigation. Finally, advances in materials and computer assisted construction techniques have improved quality and reliability throughout the industry.

Despite these engineering and technological innovations, significant marine casualties continue to occur. To further reduce casualties, the role of "human error" in the maritime safety equation has been evaluated. The term "human error" may be broadly defined as the acts or omissions of personnel which adversely affect the proper functioning of a particular system, or the successful performance of a particular task. As indicated, recent studies have suggested that in excess of 80 percent of all high-consequence marine casualties may be directly or indirectly attributable to "human error." The term "human factors" may be defined as the study and analysis of the design of the equipment, and the interaction of the equipment and the human operator, and most importantly, the procedures the crew and management follow. The purpose of studying human factors is to identify how the crew, the owner, the classification societies, and the regulatory bodies can each work to sever the chain of errors which are associated with every marine casualty.

Consequently, the international maritime community has started to emphasize participatory shipboard management. As noted by the International Chamber of Shipping and the International Shipping Federation, "the task facing all shipping companies is to minimize the scope for human decisions to contribute, directly or indirectly, to a casualty or pollution incident. Decisions made ashore can be as important as those made at sea, and there is a need to ensure that every action affecting safety or the prevention of pollution, taken at any level within the company, is based upon sound understanding of its consequences."

There is a clear need to critically address people-issues. The issues must be addressed, not only from the traditional man and machine interface and ergonomics aspects, but must also include an assessment of entire processes including navigating the vessel, cargo loading and unloading, and responding to emergencies.

The Coast Guard study team will consult with industry, including vessel operators and crew and cargo transfer operators, to obtain insight on where processes or people-issues have a potential for improved safety or efficiencies, either because of changes by the Coast Guard or by industry. Small study groups may be formed, if appropriate, and public meetings may be held to get input from a broad interest base. If the Coast Guard decides to hold a public meeting, the date and time will be announced by a later notice in the *Federal Register*.

The Coast Guard invites suggestions and recommendations. Interested persons submitting comments should submit them to CDR Craig Bone, Commandant (G-MS), U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593-0001, by telephone at (202) 267-6827, or by fax at (202) 267-4547.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF MEGAN N. DETHIER
(Shoreline Habitats)

STATE OF WASHINGTON)
) ss.
COUNTY OF SAN JUAN)

I, MEGAN N. DETHIER, being first duly sworn, upon oath, deposes and says:

1. I am over 18 years of age and competent to testify herein.

2. I am a marine ecologist employed by the University of Washington. I received my PhD in 1981 from the UW Dept. of Zoology. My PhD work as well as my subsequent 15 years of research have been devoted largely to the shoreline ecology of the state of Washington. For part of this time I developed a marine habitat classification system as a contract for the Washington DNR; this system provides a 'language' to describe shoreline in the marine and estuarine waters of the state. I have also done extensive field work, performing both basic marine ecological work aimed at elucidating the way organisms interact with their environment, and more applied work in terms of gathering baseline data on abundances of plants and animals on the state's shores. This kind of data is critical in the event of oil spills or other external events, so that we have information on how natural communities looked and functioned before such events occurred. I have also reviewed literature on the *Exxon Valdez* and other oil spills, and performed spill impact studies on the Olympic peninsula following the *Nestucca* oil spill in 1988-9. My resume includes 18 papers in peer-reviewed professional journals, and 9 reports on shoreline ecology written for state and federal agencies.

3. Shoreline habitats can be defined as types of physical environments, characterized by substrate type, wave exposure, and other factors, that are occupied by fairly predictable sets of plants and animals. Examples are mud flats, sandy beaches, and rocky shores. Each of these categories can be divided more finely in an ecologically realistic manner, for example highly wave-exposed rocky

shores have different communities of organisms living on them than wave-sheltered rocky shores. The marine and estuarine habitat classification systems that I wrote for Washington has over 60 such categories, including subtidal (permanently-submerged) habitats as well. This system is proving useful in mapping the shorelines of the state, preparing for oil spills, and making decisions on potential locations of marine preserves. Each shoreline type can be said to provide different "functions" to human societies and to biological ecosystems; for instance, sandy beaches provide wonderful recreational opportunities while mudflats with eelgrass provide habitat for juvenile crabs and salmon. The discussion below reviews some of these functions as well as the intrinsic values of the habitats themselves.

The coastline of Washington state is characterized by high habitat diversity. The outer coast of Washington has shoreline habitats consisting largely of wave-exposed rocky headlands, separated by short to long stretches of sandy beaches or mixes of gravel and sand. It also includes two very large ecologically rich estuaries (Grays Harbor and Willapa Bay), as well as the Columbia River estuary. In addition, Washington waters include the "inland sea" of Puget Sound, characterized by low wave exposure but relatively high currents, and containing a rich mix of habitat types from calm, muddy bays to open rocky shores. Marshes and other high-shore wetlands, while suffering the degradation and disappearance common all over the country, can still be found both in Puget Sound and in the outer coast estuaries. Finally, the Strait of Juan de Fuca comprises a transition zone beween the highly wave-exposed coastal region and the quieter Puget Sound waters.

4. All of the shoreline types of Washington could be deemed as having some "value", both intrinsic and in terms of human usage. Intrinsic or ecosystem-level values include:

a. *Biodiversity*. Washington's shorelines are among the most diverse in the U.S.; several hundred species of seaweeds and animals, mostly invertebrates, can be found in these habitats. This diversity relates in part to the productivity of the region (see below), and to the fact that Washington is in a transition zone between two biogeographic provinces, with species present from both. In addition, the undisturbed nature of some areas of shoreline (especially on the outer coast) helps maintain this diversity. We are increasingly recognizing that such species diversity has intrinsic value; chemicals for treating cancer are found in obscure marine sponges, little crustaceans turn out to be important fish food, and the basic complexity of natural systems may well provide a buffer against permanent disruption by human disturbance. As with tropical rainforests, events that threaten this biodiversity may have long-term and large-scale consequences that we cannot yet define.

b. *Productivity*. The marine and estuarine waters of Washington are among the most productive in the U.S. Seasonal (summertime) upwelling of nutrient-rich waters plus inputs of nutrients from the estuaries support this productivity by allowing large plankton blooms and rapid algal growth. This productivity, in turn, supports diverse and dense populations of animals, including many commercially important species. While much of this productivity comes from offshore and subtidal plankton and kelp beds, shoreline populations of seaweeds, eelgrass, and microscopic algae also contribute substantially to local productivity.

c. *Nursery And Feeding Areas for Other Species*. Many shoreline habitats are used for critical life-processes by

species that we think of as living 'elsewhere', such as subtidal fishes, marine mammals, and birds. Examples of these uses include: gravel beaches are used as spawning areas by surf smelt; low-shore eelgrass beds are used as nursery areas by commercially important crabs, and they provide protection from visual predators and a rich food source for juvenile salmon and other fishes; rocky shores provide haul-out areas for seals and sea lions – these places are important for resting and warming for these animals; extensive mudflats provide critical feeding areas for numerous species of shorebirds that consume the small worms and crustaceans in the mud – the coastal estuaries, in particular, are essential stopping and 'refueling' areas for millions of waterbirds migrating up and down the west coast.

Humans use shorelines in a variety of ways, and have done so in the Pacific Northwest for over a thousand years. Such uses include:

1) Education and Research. Groups from the preschool to the postgraduate level use Washington shoreline as natural classrooms or as collecting sites for research purposes. Public beaches such as state parks are particularly heavily used in this regard.

2) Commercial harvest of edible species. Both Native and non-native fisherman harvest organisms from shorelines; at this time, the primary intertidal (as opposed to subtidal) commercial harvests are for clams (hardshells) and oysters. Other harvested species include sand shrimp, and there is discussion of future commercial harvest of other species such as seaweeds, gooseneck barnacles, and mussels.

3) Tribal subsistence harvest. Many types of shoreline organisms are used by members of Northwest tribes for subsistence or ceremonial purposes.

4) Recreational Harvest. Washington shorelines are increasingly used by the public for recreational harvesting of numerous edible marine organisms, including clams, mussels, whelks, crabs, seaweeds, and other species. The increasing consumptive use of organisms on Puget Sound and other shorelines has been great enough to lead to new harvesting and licensing regulations.

5) Non-consumptive Recreational Use. Both tourists and Washington residents use the shorelines of Puget Sound and the outer coast. Many State and National parks incorporate some shoreline area. People use these regions for sunning, walking, fishing, wildlife-watching, and other forms of relaxation. Boaters and SCUBA divers use these areas for water access.

5. *Sensitivity of Shoreline Habitats to Oil Spills.*

Most or all of the 'values' of shoreline habitats described above can be compromised by spilled oil. Thus virtually all the shorelines in Washington are 'sensitive' to oil in some way, from mudflats that have no harvestable species but are used for feeding by many bird species, to stretches of sandy beach that are ecologically depauperate but used by thousands of visitors.

All forms of *human use* are clearly jeopardized by oil coming ashore. Recreational use of oiled beaches is likely to be low, and cleanup of beaches may alter the character or appearance of the shore (e.g., by bulldozing away oiled sand) so that normal use may not return quickly. Recreational and subsistence harvest of all species should be curtailed after a spill; even if target organisms are not killed, tissues are likely to be tainted by oil, and some species (e.g., clams) retain oil in their tissues for many months. In addition, if oil is incorporated into the sediment (for instance in a mud flat),

research has shown that animals will be constantly recontaminated by oil leaching out of the sediment. Commercial harvests are generally shut down entirely after a spill; in Prince William Sound, the possibility that fish might be tainted by oil drove down prices so that many fisherman stopped fishing following the *Exxon Valdez* spill.

Intrinsic values of shoreline habitats are also damaged by spills. Most types of marine invertebrates, seaweeds, and seagrasses are known to suffer acute or sublethal damage from oil, even at very low concentrations. Heavy oils can smother invertebrates and plants, and toxic oils can kill most species outright. Juvenile stages of animals are particularly vulnerable. Large plants such as eelgrass and kelp that provide habitat for other organisms can be damaged, leaving other species 'homeless' even if they survive the oil themselves. While there have been statements in the literature about intertidal organisms being 'hardy' and thus able to survive oil spills, the data argue against this assumption. While these species have evolved to deal with drying, freshwater runoff, freezing, and other physical extremes, oil spills are not part of their evolutionary history.

There are inadequate data on recovery time of shoreline habitats from spills to make firm generalizations, but many habitats may suffer long-term damage. The exception may be sandy beaches in highly wave-exposed areas; here, the oil is likely to be removed quickly by wave action, and while the organisms living there (mostly small worms and crustaceans) are likely to suffer high mortality, most of them will recolonize clean sand fairly quickly from other areas. In contrast, wave-exposed rocky shores may similarly be 'cleaned' quickly by natural processes, but here there are species that are long-lived (up to 20 years for mussels) and slow-growing, and that sometimes do not disperse well from

undamaged areas. Thus actual recovery of rocky-shore communities to their pre-spill state may take years. This is especially true because of the high biodiversity of these shorelines; if rare species are killed, they may not recolonize for a long time. Salt marsh and mud flat habitats can be severely affected by oil because it penetrates and persists in sediments, potentially resulting in long-term toxic effects (over 20 years in one well-studied case in Massachusetts: Teal et al., 1992)

A 1992 study for the U.S. Coast Guard sought to define areas of the Washington and Oregon coasts that would be particularly sensitive to oil spills, based on habitat sensitivity, commercial and non-commercial value to humans, presence of 'special species' such as marine birds and mammals, and other parameters. It delineated 8 large "particularly sensitive" areas in Washington state, including regions both in Puget Sound itself, in the northern inland waters, and on the outer coast. Thus there are no substantial parts of Washington's navigable waters where oil spills are not of concern for the health of shoreline habitats.

Reference:

Teal, J.M., J.W. Farrington, K.A. Burns, J.J. Stegeman, B.W. Tripp, B. Woodin and C. Phinney, 1992. The West Falmouth oil spill after 20 years: fate of fuel oil compounds and effects on animals. Marine Pollution Bulletin 24:607-614.

/s/ Megan N. Dethier
MEGAN N. DETHIER

Signed or attested before me, *JoAnn R. Baker*, by _____.

DATED this 31st day of May, 1996.

/s/ JoAnn R. Baker

NOTARY PUBLIC, in and for the State of Washington.

My commission expires: 3-28-99

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF RONALD M. THOM
(Coastal Aquatic Vegetated Habitats in Washington State)

STATE OF WASHINGTON)
) ss.
COUNTY OF PIERCE)

I, Ronald M. Thom, being first duly sworn on oath, depose and state as follows:

1. I have been a Senior Research Scientist at Battelle Marine Sciences Laboratory, Sequim, Washington, since 1990. I received a Bachelors degree in Biological Sciences in 1971, Masters degree in Biology in 1976, and Ph.D. in Fisheries in 1978. My 21 years of professional experience includes employment as a marine biologist (Los Angeles County 1971-1974; U.S. Army Corps of Engineers 1980-82), university teaching (1985-present), and university research (University of Washington, 1978-80, 1982-1990). I have been employed by local, state, and federal governments as a biologist, and has served on a number of professional committees. In 1985, I was elected chair of the Environmental Protection Agency's Puget Sound Estuary Program Technical Advisory Committee and served in that capacity for five years. In 1990, I was invited to present a paper on habitat restoration to NOAA's Conference on Restoring the Nation's Marine Environment. This conference initiated NOAA's program in Marine Restoration. In 1993, I was invited by the British Columbia/Washington Environmental Cooperation Council to produce a joint paper with a Canadian scientist on the status of coastal wetlands and habitats in the Washington and British Columbia Region. Based largely on this paper, the British Columbia/Washington Marine Science Panel eventually recommended habitat protection as the highest priority issue among all marine environmental issues in the region reviewed by the panel. I also serve as an Affiliate Faculty at the University of Washington School of Fisheries and Adjunct Faculty at Western Washington University. I teach courses on Wetland Restoration at the University of Washington Extension Program on Coastal Ecosystem Management and Wetland Ecology for Western Washington University at the Port Angeles Center.

I have managed over 100 research projects involving coastal habitats and ecosystems. My research includes benthic primary production and nutrient fluxes; seagrass ecology; physiology of estuarine plants; the effects of pollution on nearshore marine systems in California, Washington, and Alaska; habitat construction and restoration of marine and estuarine systems; effects of climate change on estuarine systems; and ecology of fisheries resources in nearshore systems. Since 1974, the vast majority of my research has been in Puget Sound and the coastal estuaries of Washington. My doctoral dissertation was on the effects of sewage pollution on marine algae near Seattle. In 1992, research led by me produced the first study to document the effects of oil on bull kelp. This study was conducted to investigate natural resource damage assessment of the Tenyo Maru oil spill.

Since 1974, I have written over 100 documents including technical reports, peer-reviewed articles, and book chapters. In addition, I have given well over 200 professional presentations on my research. My publications for the years 1994-1996, only, are listed here:

Antrim, L.D., A.B. Borde, R.M. Thom, and S. Britsch. 1996. *Water Quality Study of the Agnew Constructed Wetland for the Period July 1994 to June 1995*. PNWD 22645. Prepared for Clallam Conservation District, Port Angeles, Washington, by Battelle Marine Sciences Laboratory, Sequim, Washington.

Simenstad, C.A., and R.M. Thom. 1996. "Functional Equivalency Trajectories of the Restored Gog-Le-Hi-Te Estuarine Wetland." *Ecological Applications* 6:38-56.

Thom, R.M. 1996. "CO_2-Enrichment Effects on Eelgrass (*Zostera marina* L.) and Bull Kelp (*Nereocystis*

luetkeana) (Mert.) P. et R." *Water, Air, and Soil Pollution* 88:383-391.

Antrim, L.D., J. Dillion, and R.M. Thom. 1995. "Lincoln Park Shoreline Erosion Control Project: Monitoring for Impacts on Eelgrass, Bivalves, and Bull Kelp." To be presented at the Coastal Society 15th International Conference: Seeking Balance, Conflict, Resolution, and Partnership; July 15-17, 1996, Seattle, Washington.

Antrim, L.D., and R.M. Thom. 1995. *Lincoln Park Shoreline Erosion Control Project: Monitoring for Eelgrass, Eelgrass Transplant Plots, Bull Kelp, and Surface Substrate, 1995.* PNL-10857. Prepared for the U.S. Army Corps of Engineers, Seattle District, by Battelle Marine Sciences Laboratory, Sequim, Washington. Published by Pacific Northwest National Laboratory, Richland, Washington.

Antrim, L.D., R.M. Thom, W.W. Gardiner, V.I. Cullinan, D.K. Shreffler, and R.W. Bienert. 1995. "Effects of Petroleum Products on Bull Kelp (*Nereocystis luetkeana* P. et R.)." *Marine Biology 122:23-31.*

Shreffler, D.K., and R.M. Thom. 1995. "Estuarine Restoration: A Landscape Perspective." In *Puget Sound Research `95 Proceedings,* Volume 2, January 12-14, 1995, Bellevue, Washington; published by Puget Sound Water Quality Authority, Olympia, Washington.

Shreffler, D.K., R.M. Thom, and K.B. Macdonald. 1995. "Shoreline Armoring Effects on Biological Resources and Coastal Ecology in Puget Sound." In *Puget Sound Research `95 Proceedings,* Volume 2, January 12-14, 1995, Bellevue, Washington; published

by Puget Sound Water Quality Authority, Olympia, Washington.

Shreffler, D.K., R.M. Thom, M.J. Scott, K.F. Wellman, M.A. Walters, and M. Curan. 1995. *National Review of Non-Corps Environmental Restoration Projects.* PNL-10784. IWR Report 95-R-12. Prepared for the U.S. Army Corps of Engineers, Institute for Water Resources, by Battelle/Marine Sciences Laboratory, Sequim, Washington, Pacific Northwest Laboratory, Richland, Washington.

Simenstad, C.A., and R.M. Thom. 1995. "*Spartina alterniflora* as an Invasive Halophyte in Pacific Northwest Estuaries." *Hortus Northwest.*

Thom, R.M. 1995. "Implications for Restoration: Light, Temperature and Enriched CO_2 Effects on Eelgrass *(Zostera marina L.)*." In *Puget Sound Research `95 Proceedings,* Volume 2, January 12-14, 1995, Bellevue, Washington; published by Puget Sound Water Quality Authority, Olympia, Washington.

Thom, R.M. 1995. *Year Five Eelgrass (Zostera marina L.) Transplant Monitoring in Grays Harbor, Washington.* Letter report to the U.S. Army Corps of Engineers, Seattle District, by Battelle/Marine Sciences Laboratory, Sequim, Washington.

Thom, R., B. Miller, and M. Kennedy. 1995. "Temporal Patterns of Grazers and Vegetation in a Temperate Seagrass System." *Aquatic Botany* 50:201-205.

Thom, R.M., and D.K. Shreffler. 1995. "The Ecological Consequences of Accelerated Sedimentation on Estuarine Processes, Estuarine Organisms, the Gain and Loss of Certain Habitats." PNWD-SA-4202 A. Presented at the

Forum on Impacts of Erosion and Sedimentation in the Tillamook Bay and its Watershed, Tillamook Bay National Estuary Project, January 12, 1995, Garibaldi, Oregon.

Thom, R.M., D.K. Shreffler, and J. Schafer. 1995. *Mitigation Plan for Impacts to Subtidal Vegetation Associated with Reconstruction and Expansion of the Ferry Terminal at Clinton, Whidbey Island, Washington.* Prepared for the Washington Department of Transportation, Olympia, Washington, by Battelle/Marine Sciences Laboratory, Sequim, Washington; Battelle, Pacific Northwest Laboratories, Richland, Washington.

Thom, R.M., D.K. Shreffler, C. Simenstad, A. Olson, and S. Wyllie-Echeverria. 1995. *Mitigating Impacts of Ferry Terminals on Eelgrass in Puget Sound.* Presented at the 13th International Estuarine Research Federation Conference, November 12-16, 1995, Corpu Christi, Texas.

Levings, C.D., and R.M. Thom. 1994. "Habitat Changes in Georgia Basin: Implications for Resource Management and Restoration." In: *Review of the Marine Environment and Biota of Strait of Georgia, Puget Sound and Juan de Fuca Strait - Proceedings of the BC/Washington Symposium on the Marine Environment,* January 13-14, 1994, Vancouver, British Columbia, Canada.

Shreffler, D.K., and R.M. Thom. 1994. "Landscape-Based Procedure for Estuarine Habitat Restoration." - *Restoration and Management Notes* 12 (2):198.

Thom, R.M., T.L. Parkwell, D.K. Niyogi, and D.K. Shreffler. 1994. "Effects of Graveling on the Primary

Productivity, Respiration, and Nutrient Flux of Two Estuarine Tidal Flats." *Marine Biology,* 118:329-341.

Thom, R.M., D.K. Shreffler, and K.B. Macdonald. 1994. *Shoreline Armoring Effects on Coastal Ecology and Biological Resources in Puget Sound.* Preliminary report prepared for the Washington Department of Ecology Shorelands and Coastal Zone Management Program by Prepared for by Battelle/Marine Sciences Laboratory, Sequim, Washington; Battelle, Pacific Northwest Laboratories, Richland, Washington, and CH2M Hill, Seattle, Washington.

Thom, R.M., and R. Zeigler. 1994. "Case Histories: Estuarine Studies. Elk River Saltmarsh Restoration." In: *Partnerships & Opportunities in Wetland Restoration; Proceedings of a Workshop.* April 16-17, 1992, in Seattle, Washington. Produced by the U.S. Environmental Protection Agency, the U.S. Fish & Wildlife Service, the U.S. Army Corps of Engineers, and the University of Washington. Seattle.

Wyllie-Echeverria, S., and R.M. Thom. 1994. *Managing Seagrass Systems in Western North America.* Alaska Sea Grant College Program, University of Alaska Fairbanks, Fairbanks, Alaska.

I. *Introduction*

The objective of this affidavit is to describe the major coastal habitats occurring along the shorelines of Washington State, in particular those in the inland waters. The review is directed at the types of vegetated habitats that would be vulnerable to direct exposure to oil spilled into the marine and estuarine waters of the State. The inland waters include the Strait of Juan de Fuca, the San Juan Islands, Puget Sound, Hood Canal, as well as coastal estuaries such as Grays

Harbor, Columbia River, and Willapa Bay. This reviev is based upon personal experience and research, as wel as published and unpublished information reviewed by the auhor and cited in his written documents.

II. *Potential Areas of Exposure*

The vegetated habitats that could be directly exposed to spilled oil occur on shorelines from approximately the upper limits of the spray zone at about +4 m relative to Mean Lower Low Water (MLLW) down to a subtidal (i.e., just below the intertidal zone) depth of approximately -1 m MLLW. The elevation range includes the intertidal zone (approximately -1 to +3.5 m MLLW), which is coveredand exposed as the tide rises and falls. The lower depth limt of vegetated habitats is determined by the amount of lightthat reaches the bottom. Plants will not be present where ight cannot adequately support their photosynthesis. Becaus oil floats on the surface of the water, the intertidal zone ha the greatest probability of being impacted by spilled oil that impacts a shoreline. However, heavier fractions of oil nay sink or become suspended in the water and impact subidal habitats. Strong winds and surf can potentially carry oilinto the spray zone which occurs immediately above the uper limits of the intertidal zone.

Although most direct exposure to oil would be in pen marine and estuarine areas where salinities range from aout 35 parts per thousand (ppt) to about 5 ppt, the influence o the tide can reach well up into a river where water salinitie are 0 ppt.

III. *Habitat Types and Distribution*

This is a variety of vegetated coastal habitat type in Washington State. Although there are a numbe of classification systems for these habitats, the eight major

vegetated habitats in the areas include: seaweed beds, mudflats, sandflats, seagrass meadows, kelp forests, salt marshes, brackish marshes, and tidal fresh marshes. Seaweed beds occur over the broadest range of elevations, from the splash zone down to subtidal depths. Mudflats and sandflats occur in the intertidal and shallow subtidal zone. Seagrasses occur in the mid-intertidal zone down to shallow subtidal depths. Kelp forests occur in the very low intertidal zone down to subtidal depths. All marshes occur primarily in the upper intertidal zone and form the interface with terrestrial habitats.

The shoreline of Washington State is ringed by vegetated habitats as described above, unvegetated coarse gravel and cobble substrata, as well as developed (e.g., rip rap, pilings) structures. Even developed structures can contain viable vegetation, and the coarsest erosional surfaces (heavy cobble) can at times be vegetated with seaweeds and microalgae. Shoreline vegetation covers on the order of 2,500 miles of the State's coast. In general, marshes, mudflats and sand flats, and seagrass meadows are found in embayments, at the mouths of rivers and streams, and in other similar areas protected from high waves. Seagrass extends along most of the shoreline areas in Puget Sound and the Strait of Juan de Fuca, and is found in great abundance in Grays Harbor, Padilla Bay, and Willapa Bay. Kelp and seaweeds can be found in protected areas as well as coastlines exposed to high wave energy. Kelp and seaweeds require hard substrata such as rock for attachment. Microalgae (e.g., single celled diatoms) occur on most substrata and as epiphytes (i.e., attached to larger plants). They are particularly important components of sand and mudflat habitats, as well as seagrass meadows.

IV. *Diversity*

The region represents one of the richest locations on earth in terms of numbers of species of coastal aquatic plants. The reasons for this diversity are not fully understood but are likely related to the oceanographic conditions (i.e., mixing of water masses), temperate climate, and geology of the shorelines. Over 600 species of seaweed have been recorded from the Washington-British Columbia region. There are two major brown seaweed species that form kelp forests in the region, but several other large brown seaweeds are often grouped with kelp. There are four species of seagrasses, of which eelgrass is one. Tidal and salt marshes are not well documented in terms of numbers of species, but the records indicate that the number of species is at least as high as in the most diverse marshes in the world. Salt marshes are geologically "new" in the region. Uplift and subsidence processes that occur along the coast caused by earthquakes destroy extant marshes every 300-700 years. The marshes then rebuild themselves at a slow rate from this disturbance. Finally, the diatom flora is extremely diverse and has been studied very little. The few studies that have been done suggest that up to 50 species can be found within a very small area (e.g., 1 square centimeter) in some coastal areas.

V. *Ecological Functions*

The major ecological function of coastal vegetated systems is primary production. This means that the plants produce organic matter (i.e., fix carbon) using the energy from the sun and minerals from the water and the air. Coastal aquatic vegetation are among the most productive plant types in the world. Studies in Washington State indicate that the some seaweeds are capable of production rates as high as 900 grams of carbon per square metre per year. Seagrass meadows, kelp forests, tidal marshes are all capable of very

high production rates. Microalgae that dominate tidal flats have productivity rates that are intermediate among coastal plants. Bull kelp, which forms the major component of kelp forests in the State, essentially grows from a microscopic size to up to 20 meters in length in three months during spring and early summer. In order to support this growth, kelp fixes carbon at an extremely high rate. Coastal plants are the dominant source of energy (in the form of organic matter) to the nearshore coastal aquatic food webs. Without this source of energy, nearshore food webs would have to depend upon energy inputs from terrestrial systems and planktonic systems, which may not be adequate to support this community.

Coastal vegetated habitats perform several other ecological functions including sediment trapping, processing of nutrients, flood attenuation, and ground water recharge. Marshes and seagrass meadows trap sediment transported from rivers and streams as well as imported from the ocean. By trapping sediments, the elevation builds gradually in these habitats. Eventually the elevation extends above the highest reaches of the tides to form upland habitat. Nutrients (e.g., nitrate and phosphate) are both utilized and produced in coastal habitats. These processes affect the amount of nutrients in the water, which has a subsequent effect on the plankton-based communities in deeper areas. Wetlands (i.e., tidal fresh water marshes) can serve to store flood waters during periods of extreme rainfall. Human residences can suffer extreme flood damage in areas where tidal marshes have been removed from the system (e.g., placed behind dikes).

VI. *Associated Resources*

The primary ecological functions of coastal habitats for animals resources are: (1) food production; (2) refuge from predation; and, (3) habitat for reproduction and juvenile

rearing. Food is provided directly to animals through herbivory by primary consumers. Herbivory has been proven to be important in seaweed dominated systems, kelp forests, and in seagrasses. In particular, black brandt geese feed almost exclusively on eelgrass. Herbivory has not been studied in other systems to any great degree. Much of what is not eaten directly enters the detrital (dead organic matter) pool. Detritus is broken down into particles that can be readily utilized in the food web. Detritus is the major pathway for organic matter produced by coastal vegetation to reach the aquatic food web in the region. Another major source of organic matter to the food web is dissolved organic matter (DOM). DOM is often exuded from growing plants directly into the water where it is utilized by microorganisms that make the material utilizable by larger animals.

The coastal habitats form an continuum from the terrestrial (upland) system to the deep marine system. In terms of animal resources, this means that migratory animals can benefit from these habitats throughout their migration route. An example is juvenile salmon that are outmigrating to the open ocean. Juvenile salmon utilize, for feeding and refuge, vegetated aquatic habitats along their migration route from upstream spawning areas through estuarine marshes, mudflats and eelgrass meadows. Studies have proven the critical importance of coastal habitats in providing prime feeding and refuge areas for juvenile salmon.

Shorebirds utilize food on mudflats. Perhaps the most dramatic example of massive utilization is found in Grays Harbor. There, shorebirds on the migration to Alaska, feed in the mudflats at low tide and rest in the marshes at higher tides in Bowerman Basin. Some of the highest densities of shorebirds anywhere have been recorded in Bowerman Basin.

Dungeness crab utilize eelgrass and other habitats for much of their life history. Newly settled crabs will hide and feed in eelgrass meadows until they grow large enough to protect themselves from predation. Crabs often mate in eelgrass also.

Eelgrass meadows and seaweed beds are prime spawning areas for herring. Herring lay their eggs directly on the vegetation. Kelp forests as well as some seaweed beds and eelgrass meadows harbor populations of rockfish and have been documented to be critical habitat for juvenile fish of numerous species.

VII. *Vulnerability to Spilled Petroleum*

Research from elsewhere as well as limited research in Washington State indicate that the major vegetation types are all vulnerable to the initial and long-term negative effects of oil spilled in the marine environment. This includes impacts to the primary ecological function, primary production, as well as subsequent effects on other functions in support of animal resources in the State. It has been well documented that animal resources that utilize vegetated habit are susceptible to negative impacts of petroleum in the marine and estuarine environment.

Oil spilled in the marine and estuarine waters in Washington State can reach all coastal vegetated habitats. Since most of the oil fraction floats at the surface of the water, plants in the intertidal zone will be exposed to the oil as the tide moves up and down the shoreline. Floating oil would also contact any subtidal plants such as kelp that have parts of the plant which float at the surface. Because some oil fractions are mixed to deeper layers in the water and heavier fractions can sink, strictly subtidal plants such as some seaweed species also can be directly exposed to spilled oil. Species that occur

very high in the intertidal zone or in the splash zone would be exposed primarily during very high tides and during periods of high waves or winds.

Research elsewhere has shown that vegetated habitats that occur in more protected areas will trap spilled petroleum for longer periods of time than habitats in more exposed areas. Hence, tidal freshwater marshes, saltmarshes, mud and sand flats, some seaweed beds and eelgrass meadows would be vulnerable to trapping oil for extended periods of time. Kelp forests and exposed rocky intertidal seaweed beds would potentially not trap oil for as long a period. Although weathering and microbial processes will actively degrade trapped oil, damage to plants can continue for extended periods of time in areas where the petroleum is trapped in vegetation and sediment.

Research on the effects of spilled oil on marine and estuarine vegetation in Washington State is limited. Petroleum products from the Tenyo Maru oil spill contacted coastal bull kelp forests and other habitats within a week of the accident. Observations in the field indicated that the floating portions of the kelp in the vicinity of visible petroleum products were bleached and apparently dying. Bleaching of kelp indicates loss of pigments such as chlorophyll that are responsible for primary production. Research conducted subsequent to the spill verified that the products spilled could have caused bleached and killed the kelp. Exposure of kelp to the products during these experiments were relatively short term (4 to 24 hours). The research also showed that weathered and unweathered products (diesel, bunker C, crude) could cause bleaching and death of the plants, and that weathered diesel was the most toxic to the plants. Of significance is that the portion of the kelp that was damaged first was in the productive region of the plant. Therefore, exposure of kelp to

these petroleum products prior to reproduction could affect reproductive activity and recruitment of plants in the next year.

VIII. *Summary*

Coastal aquatic vegetated habitats in Washington State cover approximately 2,500 miles of the State's coast. Potential areas of exposure to spilled oil range from the spray zone (+4 m MLLW) to subtidal areas. Direct exposure to spilled oil could occur in vegetated habitats in marine, estuarine, and freshwater habitats. The major vegetated habitats in Washington State are seaweed beds, mudflats, sandflats, seagrass meadows, kelp forests, salt marshes, brackish marshes, and tidal fresh marshes. These habitats serve critical ecological functions including primary productivity, nutrient processing, sediment trapping, and flood attenuation. For animal resources, coastal vegetated habitats provide food, refuge, and habitat for reproduction and juvenile rearing. The importance of vegetated coastal habitat to commercially important resources such as salmon, herring, and Dungeness crab has been well documented in technical literature. All these habitat types are susceptible to damage from spilled petroleum products. Damage to kelp beds has been documented after short-term exposure to petroleum (<24 hours). Habitats that trap petroleum in vegetation and sediment also exhibit negative impacts of the extended exposure to petroleum.

/s/ Ronald M. Thom
RONALD M. THOM

Signed or attested before me, *Beverly J. Jolley*, by *Ronald M. Thorn*.

DATED THIS 31st day May, 1995.

/s/ Beverly J. Jolley
NOTARY PUBLIC, in and for the
State of Washington.

My commission expires: 12/21/97

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF DENNIS PAULSON
(Seabirds—Valuable and Vulnerable Resources of Washington's Marine Waters)

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I, DENNIS PAULSON, being first duly sworn, upon oath, deposes and says:

1. I am over 18 years of age and competent to testify herein.

2. *Introduction*. This document presents an overview of the seabirds of Washington. Seabirds are both valuable to humans and vulnerable to human activities. Because they are large and conspicuous, active in the daytime, and readily identified and censused, birds are not only attractive to amateur naturalists and birders but also can be monitored closely to serve as among the clearest indicators of the health of ecosystems.

Direct counts of seabird mortality have long been used as important measures of the biological effects of oil spills, for example, and they are equally important for estimates of natural mortality or that caused by unusual biological conditions such as El Nino. Similarly, direct counts of seabirds at both breeding and nonbreeding sites can be compared over both time and space to determine the health of their populations and thus the health of our marine environment.

3. *Marine Productivity and Washington Seabirds*. Because of the irregular shoreline, temperate climate, juxtaposition of deep and shallow waters, and currents and bottom topography that promote upwellings, Washington's marine waters are extremely productive. Prodigious amounts of phytoplankton, zooplankton, pelagic and benthic invertebrates, and fishes are produced at increasingly higher levels of the food chains characterize our coastal and offshore

environments. At the top of these rich marine food chains are seabirds and marine mammals, which are as abundant in the waters of our state as anywhere in the world. Not only abundance but diversity characterizes marine birds; for example, during the winter months there are about twice as many species of birds on the coast as in the interior of Washington (Paulson 1992).

The 125 species of birds that occur in our marine environments regularly (annually) are listed in the appendix "Seabirds of Washington," which contains a summary of the abundance, seasonality, breeding habitats and sites, foraging habitats and methods, and diets of these species. The appendix in Paulson (1992) allows the placement of Washington marine species in the context of a larger avifauna and larger region. Our state is especially significant for certain species in that our coastal waters support a majority of the Pacific coast populations of those species (noted in the Appendix).

4. *Seabird Abundance*. It must be borne in mind that different species of seabirds are present in Washington's waters in very different numbers, from those such as Sooty Shearwater and Western Sandpiper, in which perhaps millions of birds pass through in migration, to those such as Flesh-footed Shearwater and Sharp-tailed Sandpiper, in which only a few dozen birds may use our state in the course of a year. Obviously the more common species merit our attention, as they are the ones of most importance to marine ecosystems and the ones that have the most to lose to catastrophes such as oil spills.

Because Washington's waters are home to very large numbers of both breeding and wintering birds, and because a substantial portion of the seabirds that migrate up and down the Pacific coast, for example, between Alaska and California, pass through our waters, the numbers of seabirds are

staggering. Few estimates of total numbers of any one seabird species have been made, except for nesting species (Speich and Wahl 1989), but it is probably conservative to estimate the totals as >300,000 birds during the breeding season, >1,000,000 birds during the winter, and >5,000,000 birds during migration. These figures are extrapolated from partial figures given in Wahl et al. (1981), Wahl (1984), and Brueggeman et al. (1992).

5. *Seabird Categories*. Birds that use coastal waters are of two types: (1) *obligate marine species,* in which all populations use salt water; and (2) *facultative marine species,* in which only some populations use salt water, the others occurring in fresh water. Sixty-three (50.4%) of our marine species are obligate; examples include most loons, all shearwaters, Brandt's and Pelagic cormorants, sea ducks, and many shorebirds, and all alcids. Sixty-two species (49.6%) are facultative; examples include Common Loon, herons, Double-crested Cormorants, and many waterfowl.

In both of these groups, there are *resident marine species,* those that are present in our waters throughout the year, and *seasonal marine species,* those in which breeding occurs in freshwater or upland environments and marine environments are used only during the nonbreeding season. There are no marine-breeding bird species that move to freshwater or upland habitats after the breeding season, although individuals of some species do so.

Breeding species are of special significance, as they must have adequate breeding habitats and nest sites as well as adequate foraging conditions and food. The 20 species (16% of the total) that breed on the coast of Washington have entries under breeding habitat and breeding sites in the Appendix.

6. *Seasonal Patterns*. Seasonality is the rule in natural systems. Few of the marine birds of Washington are equally common in every month. Even those that are resident-present all year–vary in numbers seasonally because of the influx of additional birds from the south in summer, from the north in winter, or passing in either direction during the spring and fall migration periods. Fifteen species (12%), including our familiar Great Blue Heron, Bald Eagle, and Glaucous-winged Gull, are present in numbers throughout the year.

7. *Summer Visitors*. Fifteen species (12%) are present primarily in summer. Relatively few seabird species move north into Washington to breed, as most of the breeding seabirds are resident, but conspicuous exceptions to this include the Osprey, Snowy Plover, and Caspian Tern, all of which winter to the south. Some species that are pelagic in the nonbreeding season move inshore to coastal islands to nest while continuing to feed at sea, for example, Fork-tailed Storm-Petrel, Cassin's Auklet, and Tufted Puffin.

The richness of the region is indicated by the number of seabirds, both species and individuals, that breed elsewhere but visit Washington waters during the summer. Some species that breed on the coasts of northern Mexico and California move north after their breeding season to summer in the more productive waters of the Northeast Pacific, for example, Brown Pelican, Heermann's Gull, and Elegant Tern. These species are present in even larger numbers when El Nino conditions diminish the productivity of more southerly waters. Finally, many southern-hemisphere seabirds move into our region in summer, their nonbreeding season. These include Pink-footed, Flesh-footed, Buller's, Sooty, and Short-tailed shearwaters, and South Polar Skua. That individuals of some of these species fly over 6,000 miles to reach our waters is testimony to their productivity.

8. *Winter Visitors*. Sixty species (48%) are present primarily during the winter months. Depending on the species, migrants may arrive as early as July (numerous shorebirds) or as late as early November (some divinglucks); most depart in April and May. This huge influx ofwinter seabirds include species that breed in Alaska's marinevaters, Canadian and Alaskan Arctic tundra environmens, and freshwater and grassland habitats throughout the intrior of northwestern North American. The nesting requirements of these freshwater species precludes them from nestingon our coast, but our rich waters support their populations duing the nonbreeding season.

Wintering water birds that come from freshwær and upland habitats farther north and/or east include 3 spcies of loons, 5 grebes, 25 waterfowl, the American Cot, 17 shorebirds, and 8 gulls. Among them are our most cmmon winter birds.

Relatively few seabirds move into the area fromnarine waters to the north, but they include large numers of Northern Fulmars, Black-legged Kittiwakes, Cmmon Murres, and Ancient Murrelets. Surprisingly, equly large numbers of birds move in from the south, includig Brandt's and Pelagic cormorants and additional Commo Murres. The magnitude of migration into the area fro both north and south (with tens of thousands of murrs coming from both directions to winter in the Strait oJuan de Fuca) clearly indicates the tremendous value ofour waters to seabirds.

9. *Migrants*. Many wa:r birds use Washington waters in spring, fall, or both, a stopover habitat during short or long migratory flights. hirty-five species (28 %) are present primarily during sprig and/or fall, but many species present in other seasons a:o exhibit substantial migratory movements along our coas For example, California Gulls both breed and

winter in Washington, perhaps a few thousand of the former and hundreds of the latter; however, their coastal migrations are in the tens of thousands.

The magnitude of seabird migrations must be seen to be believed. At times, especially during April and May and again from July through October, migration can be observed directly and migrants can be censused accurately, as single birds and flocks of dozens to hundreds move past observers stationed on projecting points and jetties on the outer coast. Movements in excess of 100,000 birds/day have been recorded.

Shorebird migration is similarly spectacular. Grays Harbor and Willapa Bay provide food for hundreds of thousands of individuals of three species of sandpipers and thousands of individuals of an additional 18 species of shorebirds each spring, a spectacle that has generated sufficient public interest to warrant a Grays Harbor Shorebird Festival each year.

10. *Seabird Diets and Breeding Success*. Three major diet categories support Washington's seabird populations: plants, invertebrates, and fishes. Only a few species of waterfowl are obligate plant feeders, but they include locally abundant species such as Tundra Swan, Snow Goose, Brant, and American Wigeon. Invertebrates form the primary food for many species of waterfowl and most shorebirds. Fishes predominate in the diet of diving birds such as loons, grebes, cormorants, and alcids, and birds that fish from the air such as gulls and terns. Some species combine two of these three groups in their diets.

Clearly, a persistent base of food resources is essential to maintaining populations of marine bird species. A collapse in numbers of any organism at any level of the food web

represents a potential threat to the concentrations that characterize seabirds at nesting colonies and favored feeding areas. They may withstand local resource collapse but, especially when tied to breeding areas, may not be able to travel sufficiently far to find food; complete breeding failure over fairly large areas may ensue. Fortunately, seabirds are long-lived and are thus not severely affected by single breeding failures, but multiple breeding failures, as from long-term perturbation by human activities, have more serious consequences.

11. *Oil-Spill Vulnerability*. Obviously, the birds most vulnerable to oil spills are the obligatory marine species; a spill at any season is likely to affect them and, depending on its extent, likely to have substantial population effects. For faculative marine species, only some populations would be affected, their risk in direct proportion to the proportion of their populations on salt water. Finally, seasonal marine species would be affected only during appropriate seasons, although oil-spill effects on feeding substrates or food resources could easily persist until the arrival of these species in the appropriate season.

Seabirds are also differentially vulnerable to oil spills by way of their foraging habits. Those that remain on the water, feeding either on the surface (many waterfowl) or by dividing beneath it (loons, grebes, cormorants, diving ducks), are more vulnerable than those that remain out of the water most of the time, feeding from the water surface in flight (gulls) or on the shore (shorebirds). It is noteworthy that diving birds such as loons, grebes, and alcids have always suffered the most substantial mortality from spills.

Manuwal et a.l. (1979) devised a Bird Oil Index that takes into account differential vulnerability to oil spills. Species that possess any of the following characteristics are

considered especially vulnerable: small populations, low reproductive rate, restricted feeding distribution, highly concentrated nesting areas, narrow winter distribution aquatic roost sites, occurrence in flocks, and diving rather than flying from danger. Species considered especially vulnerable by these criteria are so indicated in the Appendix.

12. *Background Material.*

a) Marine Bird Habitats. Marine habitats can be viewed as a series of zones paralleling the shoreline. Habitats that are treated as discrete by seabirds include the following: open water surface, open water subsurface, subtidal, intertidal, and supratidal. These zones, together with physical characteristics of the bottom and the shore, define the habitats that seabirds use. Open water can be divided into protected and unprotected and with or without strong tidal currents; each type has its own seabird species. Naturalists know that if they visit an exposed rocky headland, they will find Harlequin Ducks and Black Turnstones; similarly, in a salt marsh there will be at Least Sindpipers and Green-winged Teals, in a sand-bottomed bay Western Grebes and White-winged Scoters. Some species, especially predators such as Bald Eagles and large gulls, roam across most habitat types.

b) Unprotected vs. Protected Waters. The outer coast of Washington faces the full force of Pacific winter storms, which affect not only the shoreline but, at their more extreme, well into both subtidal and supratidal realms. There is a substantial shift in seabird abundance from offshore and outer-coastal waters during summer to protected waters during winter. This may be a response to different levels of seasonal productivity or, simply, to the need for protected waters during the season of increased storms.

c) **Currents.** Tidal currents are strongest at the mouths of harbors and anywhere incoming or outgoing tidal waters are constricted by land. These same currents bring nutrients to the surface, increasing productivity and supporting concentrations of prey. San Juan Channel and Admiralty Inlet are such places, where thousands of birds gather in season to feed on the fishes that swarm there. Many of the birds float downcurrent, then fly back upcurrent and repeat the foraging run. Red-necked and Horned grebes fly readily and are part of this spectacle, while Western Grebes, poorer fliers, spend their time in quiet bays with little current.

d) **Bottom Types.** Bottom type is significant in determining the diversity, abundance, and species representation of the invertebrates that are preyed upon by fishes-seabird food-and the birds themselves. Bottom types, both subtidal and intertidal, vary from solid rock to cobble to sand to mud, and in each type, there is a different suite of prey species. For example, rock bottoms support attached mussels, primary food for Suf and Black scoters, while sand bottoms support burrowing clams, primary food for White-winged Scoters.

e) **Shorelines.** As with the bottom the shoreline may be composed of rock, cobble, sand, or mud, or mixtures of these elements; each type has its own shorebird species. Depending on the intertidal topography, low tides may expose narrow rock ledges or thousands of acres of rich mudflats. In addition, the influence of freshwater and terrestrial habitats is felt everywhere the land meets the sea. Terrestrial environments are obviously of great importance to seabirds as nest sites.

f) **Summary.** The marine waters of Washington are richly productive of life, the most conspicuous sign of which are its abundant and diverse seabirds. The 125 species of

birds that occur in these waters, totaling hundreds of thousands to millions of individuals, are spread throughout a great diversity of marine habitats. Many species breed on our coast, and many waters provide especially significant breeding or wintering grounds. All of these birds, particularly those that dive beneath the surface to forage and those that nest colonially or otherwise occur in large concentrations, are highly vulnerable to oil spills.

g) **References.**

Brueggeman, J.J., Ebasco Environmental, and Ecological Consulting, Inc. 1992. Oregon and Washington Marine Mammal and Seabird Surveys. OCS Study, MMS 91-0093, U.S. Minerals Management Service.

Manuwal, D.A., T.R. Wahl, and S.M. Speich. 1979. The seasonal distribution and abundance of marine bird populations in the Strait of Juan de Fuca and northern Puget Sound in 1978. NOAA Technical Memorandum. ERL MESA-44, 391 pp.

Paulson, D.R. 1992. Northwest bird diversity: from extravagant past and changing present to precarious future. Northwest Env. J. 8:71-118.

Speich, S.M., and T.R. Wahl. 1989. Catalog of Washington Seabird Colonies. U.S. Fish & Wildlife Service, Biology Report 88, 511 pp.

Wahl, T.R. 1984. Distribution and abundance of seabirds over the continental shelf off Washington. Privately published, 44 pp.

Wahl, T.R., S. M. Speich, D.A. Manuwal, K.V. Hirsch, and C. Miller. 1981. Marine bird populations of the Strait of Juan de Fuca, Strait of Georgia, and adjacent waters in 1978 and 1979. DOC/EPA Interagency Energy/Environment R&D

Prog., Rep. EPA/600/F-81-156, U.S. Environmental Protection Agency, 789 pp.

/s/ Dennis Paulson
DENNIS PAULSON

Signed or attested before me, *Beverly J. Jolley*, by *Dennis Paulson*.

DATED this 30th day of May, 1996.

/s/ Beverly J. Jolley
NOTARY PUBLIC, in and for the
State of Washington.
My commission expires: 12/21/97

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF MORRIS W. BARKER

STATE OF WASHINGTON)
) ss.
COUNTY OF THURSTON)

I, Morris W. Barker, being first duly sworn on oath, depose and state as follows:

1. My educational background includes Bachelor and Master of Science degrees from Oregon State University and a Doctorate of Philosophy from the University of Washington, all of which are in the field of fisheries science.

2. I am by training a fishery scientist and biologist and have been employed by the Washington Department of Fish and Wildlife since 1978. Presently, I am the Division Manager for Marine Resources and have worked in this area for close to three years. I am responsible for management of all marine shellfish and non-anadromous finfish in state waters, both Puget Sound and offshore. These duties also include a participatory role in multi-jurisdictional management within the 200-mile exclusive economic zone of the United States. This position requires familiarity with the population status and dynamics of the stocks, the fisneries and communities that are dependent on those stocks as well as an overview of the stock ecosystem role and their interrelationship in the context of allowable harvest and concomitant effects. Prior to this management position, I worked as a fisheries biologist in salmon management. I have managed all five Pacific salmon species of the northwest salmon stocks, both from coastal and Puget Sound natal streams. These duties involved development and understanding of the freshwater and marine life history –including the migratory patterns in Puget Sound and the ocean-harvest management, and negotiations with foreign and domestic governments.

3. *Productivity and Diversity of Puget Sound Marine Resources.* The productivity and diversity of Puget Sound marine waters is quite extensive and supports a very complex and integrated ecosystem. The interdependencies of the

marine and terrestrial life that are obligatory to this system are both robust and fragile: robust in that there are vital and healthy populations, and fragile from the perspective of the linkages between species and/or their habitat. Examples in this latter category include the relationship of bald eagles and marine mammals with the fish upon which they prey; the dependency of forage fish such as herring or surf smelt on critical spawning habitat in the intertidal zone and on marine vegetation; the protective habitat and food provided by marine vegetation to many invertebrate species, juvenile rockfish and other small fish species; and the dependency of many protected sea bird species (including the endangered marbled murrelet) on the health and productivity of forage fish populations such as herring and sand lance. Damage or destruction of any of these links has consequences that extend significantly beyond the immediate visible effects and ripple through the food chain with negative impacts to the whole ecosystem.

There are many hundreds of species of animals and plants that contribute to this functioning resource base and for the most part their individual species roles are esoteric or unknown. However, for those many species of recreational, commercial and cultural interest in Puget Sound the relationships between species and their effect on society are better understood. These organisms include five species of salmon (chinook, coho, pink, chum and sockeye) and three species of anadromous salmonids (steelhead, dolly varden and cutthroat); over 30 species of rockfish, dogfish shark, many species of flatfish (English sole, starry flounder, rock sole, sand dabs, etc) and other marine groundfish including pollock, Pacific cod and whiting; two species of crab; two species of urchins; abalone; at lest four species of shrimp; and over a dozen species of bivalves (oysters, clams and scallops)

including the geoduck which supports valuable Tribal and commercial fisheries (Attachment: 1996 Geoduck Atlas).

4. *Salmon Resource.* For each of the five salmon species there are three critical habitat components; freshwater, estuarine and marine. All salmon spawn in freshwater and migrate to the sea anywhere from a week to more than a year after hatching, depending on the species. All of the species pass through estuarine areas on the way to the sea. The estuary is a very productive environment and supplies a critical early rearing and feeding ground for many of these species. This is also a period of great physiological stress as the young salmon (smolt) transitions from a freshwater to a saltwater environment. This transition is marked by complex internal changes to adapt to the new medium. Many studies have demonstrated that extra stress at this time can disrupt the smoltification process and create significant mortalities among the outbound juveniles. Pollution is one of the major factors that disrupt the smoltification process. Between March and June millions of juvenile salmon leave the rivers where they were born and migrate along the shorelines of Puget Sound feeding on pelagic invertebrate and vertebrate fauna (adults such as copepods; and larval forms of such species as crab and fish) as they make their way to the ocean feeding grounds. After 1-7 years, again depending on the species , they return as adults to the Puget Sound on their way back to their natal stream. Some stocks of chinook and coho salmon, and pink salmon to a lesser extent, find the waters of Puget Sound to be productive enough to support their adult rearing needs. Consequently they reside in Puget Sound year around and provide for a constant source of recreational fishing opportunity. From April through December, hundreds of thousands of salmon move through the waters of Puget Sound where sport, commercial and tribal fishers harvest them.

5. *Marine Fish and Baitfish.* Finfish resources utilize habitats that include estuarine and nearshore environments. Many species of rockfish, flatfish, lingcod and forage fish use these shallower water environments in their early life history as nursery grounds after they settle out of their planktonic larval stage of development. Both the shallow water environment, including intertidal, and the surface waters where many of the larval forms can be found are very susceptible to lethal impacts from pollution such as petroleum and its refined products. Not only do these species become impacted but their prey items are also impacted (includes not only pelagic fauna but also phytoplankton). Although many of the finfish will move to deeper water to live their adult life there are many species who spend their adult life in shallow water or are obligatory temporary inhabitants because they spawn in the shallow and/or intertidal areas. Such species (including surf smelt, rock sole, and herring) are important recreational and commercial species as well as important prey items to the other animals in the ecosystem. Direct oiling can smother eggs in and on the substrate, chemically poison the progeny, and cause adult spawner avoidance and/or mortalities from the chemical contaminants.

6. *Shellfish.* All shellfish in Puget Sound are at risk from pollution, particularly petroleum and its refined products. Shellfish (invertebrates) in their many forms spend all or a part of their life cycle as plankton in the water column. The presence of polluting materials in and on the water create a large number of mortalities among these fragile organisms and their prey items (see Para. 5). Those species who only spend a portion of their life cycle in the water column could also be subjected to environmental impacts as juveniles and adults. Many important commercial and recreational species fall into this category (oysters, clams, mussels, urchins and abalone) which all could be affected by

direct oiling in the intertidal areas as well as other levels of exposure through sinking sediments and chemical contaminants.

7. *Social-Economic Fisheries Issues*. In terms of socio-economic issues, this system in turn supports many year around and seasonal commercial and recreational fisheries (see attachments re: recreational and commercial catch statistics: 1993 Fisheries Statistical Report and Washington State Sport Catch Report For Foodfish 1993) as well as the culture and traditional lifestyle of the Washington Treaty Indian Tribes through their fishing activities. For example, in 1993, Washington *commercial* fish and shellfish harvesters delivered over 189 million pounds of seafood worth $159 million at the ex-vessel level and $354 million dollars at the wholesale level, including the harvest of 6,525,000 salmon with a retail value of $74,128,000. Also, in 1993, 1,010,030 sport anglers caught an estimated 475,632 salmon in marine waters. And 1,252,177 pounds of clams and 78,753 pounds of oysters were harvested from Puget Sound areas east of Dungeness spit.

The value of a healthy, stable and diverse ecosystem provides extensive year around economic return to the state and its communities as well as strong cultural linkages to the many diverse ethnic groups. These economic values come from direct sales, secondary enhanced products, infrastructure support (marine equipment, fishing gear, fuel, marinas, boat yards) jobs, taxes, etc. Many indirect values are also evident through family recreational experiences, maintenance of traditional fishing community and individual lifestyles. The clean waters of Puget Sound, salmon fishing and other seafood resources have long been synonymous with the Pacific Northwest and this has provided the incentive for

many people to move both businesses and families to this area.

/s/ Morris W. Barker
MORRIS W. BARKER

Signed or attested before me, *Beverly J. Jolley*, by *Morris W. Barker*.

DATED this 31st day of May, 1996.

/s/ Beverly J. Jolley
NOTARY PUBLIC, in and for the
State of Washington.
My commission expires: 12/21/97

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF SUSAN ZEMEK

STATE OF WASHINGTON)
) ss.
County of Thurston)

I, Susan Zemek, being first duly sworn on oath, depose and say:

1. That I am a citizen of the United States, over the age of 18 years, and competent to be a witnesses in the above-entitled cause.

2. I am the Public Affairs Administrator for the Washington State Parks and Recreation Commission.

3. My responsibilities as Public Affairs Administrator include providing statistics on the extent and nature of public usage of Parks and Recreation Commission facilities.

4. Attached hereto as Exhibit 1 is a true and accurate list of Parks and Recreation Commission sites located on or adjacent to Puget Sound, and an indication of the estimated annual visitation for each such site, as well as a list of recreational activities which are customarily undertaken at each site.

5. These statistics indicate that the total annual estimated visitation for Parks and Recreation Commission sites on or adjacent to Puget Sound is 55,917,511.

/s/ Susan Zemek

SUBSCRIBED and SWORN to before me this 31 day of May, 1996, by Susan Zemek.

/s/ Judy K. Larson
JUDY K. LARSON

NOTARY PUBLIC in and for the State of Washington.
My appointment expires: 12-25-96

EXHIBIT 1

WASHINGTON STATE PARKS

Here is a list of Washington State Parks, followed by their 1995 attendance, and a list of activities commonly done at the park. Total park visitation for 1995 is 55,917,511.

Anderson Lake: 220,558
Fishing and hiking.

Bay View: 1,424,298
Camping, picnicking, swimming and sailboarding.

Beacon Rock: 1,678,729
Picnicking, camping, hiking, playground activities, fishing, boating, rock climbing, horseback riding, historical site, and mountain biking.

Belfair: 2,573,066
Camping, picnicking, beachcombing, crabbing, and kite flying.

Birch Bay: 6,442,672
Camping, scuba diving, picnicking, hiking, clamming, bird watching, water skiing, crabbing, beachcombing, kite flying, windsurfing, and photography.

Blake Island: 1,060,555
Picnicking, camping by boat, boating, water skiing, fishing, hiking, beachcombing, scuba diving, bird watching, and marine life study.

Blind Island: 23,646
Camping, picnicking, scuba diving, and bird watching.

Camano Island: 1,968,035
Camping, picnicking, hiking, boating, clamming, nature study, scuba diving, rock collecting, and bird viewing.

Clark Island: 33,879
Camping, picnicking, fishing, hiking, scuba diving, and clam digging.

Cone Island: Undeveloped.

Crow Butte: 946,572
Boating, camping, fishing, hiking, picnicking, sightseeing, swimming, water skiing, windsurfing, and bird watching.

Cutts Island: Undeveloped.

Dalles Mountain Ranch: Undeveloped.
Hiking.

Danger Island: Undeveloped.

Dash Point: 2,021,920
Camping, picnicking, hiking, fishing, beachcombing, and marine life study.

Deception Pass: 19,658,351
Camping, boating, hiking, fishing, swimming, beachcombing, historical site, and Environmental Learning Center.

Doe Island: 16,632
Camping, picnicking, fishing, scuba diving, and hiking.

Dosewallips: 985,973
Camping, picnicking, hiking, fishing, oyster harvesting, clamming, shrimping, and wildlife viewing.

Doug's Beach: 298,558
Windsurfing and fishing.

Dungeness Spit:
Hiking.

Eagle Island: Undeveloped.
Clamming and fishing.

Ebey's Landing: 210,847
Trail to historic cemetery, beachcombing, hiking, and surf fishing.

Everett Jetty: Undeveloped.

Fay Bainbridge: 1,058,016
Camping, picnicking, beachcombing, fishing, clamming, crabbing, scuba diving, and boating.

Fort Canby: 3,131,338
Lava site, artillery site, camping, picnicking, beachcombing, fishing, heritage site, hiking, clamming, and boating.

Fort Casey: 2,814,084
Camping, picnicking, hiking, fishing, driftwood collecting, interpretive center, boating, and historical site.

Fort Columbia: 761,189
Natural historic site, historical fort, interpretive center, picnicking, and hiking.

Fort Ebey: 1,673,992
Camping, hiking, picnicking, interpretation, and beachcombing.

Fort Flagler: 1,784,488
Camping, picnicking, boating, beachcombing, hiking, scuba diving, fishing, clamming, crabbing, and historical site.

Fort Ward: 319,582
Picnicking, beachcombing, hiking, clamming, crabbing, boating, fishing, and scuba diving.

Fort Worden: 5,686,312
Camping, conferences, fishing, scuba diving, youth hostel, hiking, cultural arts, picnicking, boating, biking, historical site, and museum.

Freeman Island: Undeveloped.

Hoodsport Trail: 81,061
Hiking and picnicking.

Hope Island North: Undeveloped.
Picnicking, beachcombing, clamming, and fishing.

Hope Island South: Undeveloped.
Picnicking, beachcombing, clamming, and fishing.

Horsethief Lake: 540,352
Indian pictographs, boating, rock climbing, windsurfing, picnicking, and camping.

Iceberg Island: Undeveloped.

Illahee: 1,5847,742
Camping, boating, picnicking, water skiing, oyster harvesting, clamming, and hiking.

James Island: 105,907
Camping, picnicking, hiking, fishing, and scuba diving.

Jarrell Cove: 240,640
Picnicking, hiking, camping, clamming, fishing, and boating.

Joemma Beach:
Beachcombing, camping, boating, clamming, crabbing, fishing, camping, and picnicking.

Jones Island: 188,955
Camping, picnicking, fishing, clamming, and scuba diving.

Joseph Whidbey: 416,655
Picnicking, hiking, beachcombing, and camping.

Keystone Spit:
Beachcombing, picnicking, bird watching, fishing, kite flying, sail boarding, and interpretation.

Kitsap Memorial: 1,238,307
Picnicking, camping, hiking, volleyball, and baseball.

Kopachuck: 618,536
Hiking, camping, boating, picnicking, water skiing, beachcombing, fishing, scuba diving, and bird viewing.

Lake Cushman: 924,912
Picnicking, boating, water skiing, hiking, camping, and fishing.

Larrabee: 2,521,613
Picnicking, boating, fishing, clamming, camping, water skiing, crabbing, hiking, beachcombing, and scuba diving.

Lilliwaup Tidelands:
Beachcombing, clamming, and shellfish digging.

Lime Kiln Point: 582,824
Whale watching, picnicking, and hiking.

Lopez Island Tidelands: Undeveloped.

Manchester: 575,274
Scuba diving, fishing, picnicking, camping, interpretation, and hiking.

Maryhill: 2,425,058
Boating, camping, fishing, hiking, picnicking, swimming, water skiing, and wind surfing.

Matia Island: 47,726
Camping, picnicking, fishing, scuba diving, hiking, and clamming.

McMicken Island: 18,250
Hiking, clamming, and fishing.

Moran: 3,066,055
Hiking, camping, swimming, Environmental Learning Center, boating, fishing, biking, and historical site.

Mukilteo: 5,950,920
Beachcombing, bird watching, kite flying, boating, and historical site.

Mystery Bay: 364,795
Picnicking, boating, clamming, and crabbing.

Old Fort Townsend: 755,410
Camping, picnicking, hiking, fishing, clamming, crabbing, bald eagle viewing, and historical site.

Old Man House: 2,707
Picnicking and clamming.

Olga:
Boating.

Patos Island: 32,151
Camping, picnicking, fishing, hiking, and clamming.

Peace Arch: 1,660,331
Horticultural displays, interpretation, picnicking, gardens, and miscellaneous city sponsored recreational activities.

Penrose Point: 671,806
Picnicking, boating, camping, hiking, beachcombing, and fishing.

Pleasant Harbor:
Boating.

Posey Island: 10,875
Boating.

Potlatch: 1,198,847
Picnicking, camping, fishing, scuba diving, and boating.

Rock Island: Undeveloped.

Rothschild House: 76,149
Restored historical house, interpretation.

Saddlebag Island: 21,224
Camping, picnicking, fishing, hiking, and crabbing.

Saltwater: 2,954,392
Picnicking, camping, scuba diving, hiking, and clamming.

Scenic Beach: 907,093
Picnicking, camping, hiking, boating, fishing, harvesting oysters, and interpretation.

Sequim Bay: 2,126,725
Picnicking, camping, fishing, clamming, scuba diving, beach walking, field and group sports, tennis, boating, beachcombing, hiking, and bird viewing.

Shine Tidelands: 107,516
Beachcombing, hiking, scuba diving, and windsurfing.

Skagit Island: Undeveloped.

Skull Island: Undeveloped.

South Whidbey: 1,089,340
Picnicking, hiking, scuba diving, rock collecting, clamming, bird watching, crabbing, camping, driftwood collecting, fishing, and beachcombing.

Spencer Spit: 1,081,431
Camping, picnicking, beachcombing, bird viewing, fishing, clamming, and interpretation.

Square Lake:
Swimming, hiking, canoeing, and fishing.

Stretch Point: 16,273
Picnicking, beachcombing, boating, clamming and fishing.

Stuart Island: 195,301
Camping, picnicking, hiking, fishing, clamming, and crabbing.

Sucia Island: 528,430
Camping, picnicking, hiking, boating, clamming, and crabbing.

Toandoes Peninsula Tidelands: Undeveloped.

Tolmie: 2,412,137
Picnicking, beach walking, clamming, fishing, and scuba diving.

Triton Cove: 75,969
Picnicking and boating.

Turn Island: 27,353
Camping, picnicking, fishing, clamming, and scuba diving.

Twanoh: 1,843,593
Boating, picnicking, swimming, oyster harvesting, water skiing, fishing, camping, and hiking.

Useless Bay: Undeveloped tidelands.

Victim Island: Undeveloped.

Wenberg: 1,999,528
Camping, picnicking, play area, swimming, boating, water skiing, fishing, hiking, and windsurfing/sailing.

West Hylebos: 173,328
Bird watching and hiking.

Wolfe Property: 89,304
Beachcombing, hiking, camping, scuba diving, windsurfing, clamming, and crabbing.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

AFFIDAVIT OF RICHARD KOCAN

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I, RICHARD KOCAN, being first duly sworn, upon oath, deposes and says:

1. I am over 18 years of age and competent to testify herein. I have attached a copy of my resume.

2. Since 1989 when the Exxon Valdez spilled 11 million gallons of Prudhoe Bay crude oil in Prince William Sound (Alaska), environmental scientists have significantly expanded our knowledge of the effects of petroleum on the biota of a fjord-like marine ecosystems. During the 7 years following the spill, natural resource damage assessment (NRDA) studies have examined every aspect of the Prince William Sound ecosystem. Because Puget Sound is similar to Prince William Sound in many ways, it is possible to predict the effects of an oil spill on the marine resources of Puget Sound using data collected in Prince William Sound since 1989.

3. The effects of spilled petroleum on Puget Sound will be influenced by factors such as:

1. Amount of oil spilled;
2. Where oil is spilled (bay vs open water; high energy beach vs quiet bay);
3. Type of oil (eg. geographic origin; crude or refined);
4. Water exchange (currents and tidal effects);
5. Season (spawning; migration);
6. Weather (wind; rain);
7. Response time and experience of clean-up crews;
8. Coordination of clean-up among various responsible agencies.

4. Puget Sound is a marine fjord consisting of heavily industrialized embayments and open, relatively pristine areas. Overall, water exchange within the Sound is limited, with some areas judged to be more sensitive than others to anthropogenic inputs because of their depth and/or low water exchange. Some of these sensitive areas include but are not limited to:

Hood Canal	Dyes Inlet
Sinclair Inlet	Holmes Harbor
Budd Inlet	Dabob Bay
Sequim Bay	Liberty Bay
Carr Inlet	Port Susan
Quartermaster Harbor	Penn Cove
Case Inlet	Port Orchard

Because these areas are relatively confined and shallow, they would be more adversely affected by an oil spill than would open areas. The sediments in shallow intertidal and subtidal areas would become heavily contaminated and affect survival and reproduction of organisms such as clams, oyster, mussels, crabs and intertidal fishes.

5. Although crude oil is sparingly soluble in seawater (< 10ppb) it partitions into sediments and seasurface microlayer at levels ranging from 1,000 - 10,000 ppm. Since many marine organisms have embryonic and larval states that are benthic (sediment) or neustonic (seasurface) there is a high probability that they will come into contact with toxic concentrations of hydrocarbons if a spill occurred in an area used by these early life stages. Normally only highly visible or economically important organisms, such as fish, shellfish and marine mammals are examined following an oil spill. Of equal importance is the microscopic plankton that constitutes the bottom of the food chain and upon which the entire marine

ecosystem depends. Following the Exxon Valdez oil spill it became evident that these microscopic food items were severely damaged and that the effect rippled through the entire food chain.

6. A number of organisms are common to both Prince William Sound and Puget Sound, so one would expect that if an oil spill occurred in Puget Sound it would produce damage similar to that seen in Prince William Sound. A few examples of animals common to both ecosystems, and the expected effects of oil contamination are discussed here. Seal and sea lion populations in Puget Sound have increased dramatically since the inception of the Marine Mammal Protection Act and are common in many parts of Puget Sound today. Sea otters are successfully reestablishing themselves along the Pacific coast as well as the Straights of Juan de Fuca, and river otters are common throughout Puget Sound and Hood Canal. All of these mammals are susceptible to oiling and frequently suffer serious health problems and mortality when exposed. Bald eagles have extended their range south of the Skagit River and are often seen nesting in areas as close to Seattle as Bainbridge Island and the Kitsap Peninsula. These birds are scavengers and eat oil-contaminated fish and birds in the area of an oil spill, thus suffering the toxic effects of ingested oil. Other birds such as murrelets, auklets and diving ducks frequent Puget Sound either as permanent residents or migrants and are highly susceptible to hypothermia following exposure to oil.

7. The Puget Sound herring population has remained stable for nearly 15 years following the closure of most commercial fishing of this species. For the past several years the populations have been high enough that the Washington Department of Fisheries has permitted a limited roe-on-kelp fishery and bait fishery that supports both Indian and non-

Indian fishermen. Since herring are intertidal and subtidal spawners, their eggs are at high risk of being exposed to spilled oil. Their larvae live in and feed in the top few centimeters of the sea surface for the first three months of life and come into direct contact with oil slicks and the seasurface microlayer. Although fishable salmon populations in Puget Sound have remained relatively stable, wild stocks have suffered dramatic declines over the past decade due primarily to habitat destruction. An oil spill that affects intertidal reaches of salmon spawning streams, areas used by pink and chum salmon, would further damage valuable spawning habitat and increase the rate of decline in wild fish of these species.

The oiling of shellfish beds would result in the loss of both commercial and recreational shellfishing as well as contaminating a major food item for many marine animals. Mussel beds are known to trap oil under them for as long as five years following an oil spill, and this trapping of oil under these beds would not only contaminate the mussels but for many years, potentially impact those species that depend on them as food.

8. The following list includes those resources that were damaged by the Exxon Valdez oil spill and the specific types of damage observed. Similar resources would be expected to suffer similar damage if an oil spill occurred in Puget Sound (see attachments).

Mammals

a) **Harbor seals:** A conservative estimate of 345 seals died in Prince William Sound as a result of exposure to crude oil. Petroleum metabolites in the seal's bile were 7-13 times higher in oiled areas relative to unoiled areas and it is believed that their immune system may have been damaged.

In oiled areas 50-100% of the seals were oiled because they do not avoid oil and pups became oiled shortly after birth. Microscopic examination of dead oiled seals revealed they suffered from brain lesions characterized by swelling and degeneration of the nerve axons which interfered with nerve transmission. This made it difficult for affected individuals to perform normal activities such as swimming, diving, feeding and escaping predators. The blubber contained the highest levels of hydrocarbons, but mammary tissue and milk also contained up to 1,200 ppb. Pup production was lower and mortality higher in oiled areas in 1989 than in 1990 or 1991.

b) **Sea Otters:** Surveys of otters between 1989 and 1991 showed that between 3,500 and 5,000 sea otters died as a result of the spill. This is 20-25% of the total sea otter population of the Gulf of Alaska. In 1992 there was still higher than normal mortality among adult otters and poor survival of juveniles, indicating that the otters had not yet recovered from spill damage. The most common terminal clinical syndrome seen in oiled otters was shock characterized by hypothermia, lethargy and hemorrhagic diarrhea. Internally, interstitial pulmonary emphysema was the most prevalent lesion seen in oil-contaminated otters.

Birds

c) **Bald eagles:** Estimates range from 200-300 to > 900 dead bald eagles following the Exxon Valdez oil spill. The greatest damage occurred immediately after the spill, was short term and resulted from direct contact with oil or oil-contaminated prey items.

d) **Common murres:** Both mortality and sublethal effects were observed in Common murres. Between 175,000 and 300,000 murres were killed in 1989 and reproduction among the survivors was still below normal in 1992. Annual

counts of murres from 1989-1991 at colonies within the oil trajectory were 40-60% lower than pre-spill counts while at colonies just outside the trajectory there was no observed population decline.

e) **Pigeon guillemots:** Between 1,500 and 3,000 guillemots died (25-36%) in 1989 following the oil spill. By 1992 the population was approximately one half its pre-spill size. The most heavily oiled areas suffered the largest population declines in 1989; about twice as great in oiled areas as in unoiled areas. Unhatched eggs were found coated with oil as late as 1990, indicating that the birds were still being exposed one year after the spill. Guillemots were not recovering by 1992.

Fish

f) **Pacific herring:** In 1989 Prince William Sound herring suffered significant egg mortality, increased deformed larvae, and reduced hatching weight in oiled spawning areas but not in unoiled areas. Larvae from oiled spawning areas also exhibited a significant increase in genetic damage in the form of chromosome breakage and abnormal cell division as well as lower hatching weights. These findings were confirmed in laboratory experiments where herring embryos were exposed to known amounts of Prudhoe Bay crude oil. Females that had been exposed to oil as juveniles produced significantly fewer normal and live larvae when they returned to spawn four years later.

Microscopic examination of herring tissues in 1989 revealed that fish captured from several oiled areas had severe hepatic necrosis (liver cell death), while those collected from unoiled sites were normal. Experimental exposure of herring to environmentally realistic levels of oil resulted in identical live damage in the exposed fish.

In 1993 and 1994 over 90% of the Prince William Sound spawning herring biomass disappeared as a result of VHS, a viral disease that had not been known to occur in herring prior to the oil spill. Mortality in herring associated with VHS virus has not occurred in free ranging fish outside Prince William Sound, except where petroleum has been spilled. Studies in Puget Sound have shown that juvenile herring less than 6-months-old are already infected with this potentially lethal virus and that if wild herring are stressed, epizootics of VHS occur.

g) **Salmon:** Increased egg mortality and physically deformed fry were observed in pink salmon in oiled streams between 1989 and 1992. It is suspected that the poor pink salmon returns in 1992 and 1993 may be the result of earlier increased egg mortality in oil streams. Egg and fry mortality was found from the mouth of the spawning streams up to the highest level reached by oil in 1989. Significantly less mortality was observed in streams that escaped oiling in 1989.

Shellfish

h) Caged mussels deployed at various sites in and around Prince William Sound were found to be contaminated with whole Exxon Valdez oil, even when deployed at 25 meters. The highest levels of mussel contamination occurred closest to the oil trajectory and at 1 meter depths near oiled shoreline. These reached levels of 5.7 μg/g at 1 m and 3.17 μg/g at 5 m. Mussels deployed outside Prince William Sound in 1989 and those deployed in the Sound in 1990 and 1991 had hydrocarbon concentrations below detection limits. These contaminated mussels had whole Exxon Valdez Oil in their tissues, indicating that particulate oil can sink to significant depths following a spill.

Coastal Habitat

i) **Intertidal habitat:** Population declines and sublethal effects were observed in numerous intertidal plants and animals. Lower and mid intertidal areas appear to be recovering faster than the upper intertidal zones, which had not fully recovered three years after the oil spill. Oil persists in and under mussel beds five years after the oil spill.

j) **Subtidal habitat:** Subtidal plants and animals suffered both population declines and sublethal effects. Eelgrass and some species of macroalgae were recovering three years after the spill.

Economic Resources

k) **Commercial fishing:** Emergency commercial fishing closures were instituted in 1989 throughout the spill area and affected salmon, herring, crab, shrimp, rockfish, and sablefish. Herring were opened from 1990 through 1993 when there was a 90,000 ton decline in biomass which once again triggered a fishing closure that continues into 1996.

l) **Tourism:** Forty-three percent of the commercial tourism business in the Prince William Sound area reported a decline in business due to the oil spill. This was reduced to 12 percent by 1990.

/s/ Richard M. Kocan
RICHARD KOCAN

Signed or attested before me, *Richard Kocan,* by _____.

DATED this 3rd day of June, 1996.

/s/ Linda M. Marsh
NOTARY PUBLIC, in and for the
State of Washington.
My commission expires: 10/28/97

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

NO. C95-1096c

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

vs.

MIKE LOWRY, Governor of the State of Washington, et al.,
Defendants.

AFFIDAVIT OF RONALD F. TEISSERE

STATE OF WASHINGTON)
) ss.
County of Thurston)

I, RONALD F. TEISSERE, being first duly sworn upon oath, deposes and says:

1. I am an Assistant Division Manager for the Washington Department of Natural Resources, Division of Aquatic Resources. I have been in this position since 1989. My duties include supervision of the state's geoduck clam sales program, the maintenance of the ownership and encumbrance records of state-owned aquatic lands, the land use planning functions of the Division, and the collection of data on the near-shore physical and biological habitats of Puget Sound.

2. I have reviewed the July 1, 1995, table of lands managed by the Department of Natural Resources, especially

with regard to state-owned aquatic lands, that is attached to my affidavit as Exhibit 1. The Department of Natural Resources manages these state-owned aquatic lands as a steward under the Public Trust Doctrine. This responsibility came to the state as a result of its acquisition of these sovereign lands from the United States at statehood. RCW 79.90.455 articulates the implementation of this responsibility with regard to the management and development of state-owned aquatic lands by the Department.

3. As shown on Exhibit 1, the revenue from leases, easements, sales of valuable materials, and other uses of state-owned aquatic lands is distributed to three different accounts based on either the nature of the activity as in the case of dredge disposal, or the type of lands involved. The three accounts are the Aquatic Lands Dredge Disposal Account, the Aquatic Lands Enhancement Account, and the Resource Management Cost Account. The direct revenue generated from state-owned aquatic lands for Fiscal Year 1995 was $9,983,858.

4. Most leases of state-owned aquatic land are for uses such as boat moorage and marine terminals that, by their nature, require a waterfront location. The Legislature has directed that the rentals for these uses be set below fair market value to encourage economic development around Puget Sound and other waters of the state. This strategy has been demonstrably successful, as shown by the economic value associated with the development of the waterfront areas. Estimates of this value are many times the direct revenues.

5. Another aspect of the development of the Puget Sound waterfront has been the increase in the value of real property adjacent to the waterfront. In some areas of the Sound, assessed valuations of residential waterfront property exceeds two million dollars per acre. The property taxes

generated by these high property values flows directly to local governments. The waterfront property value, after applying a legislatively-established discount, is the principle determinant of rentals for leases of state-owned aquatic lands.

6. Exhibit 1 does not address the major economic values of state-owned aquatic lands. These other values include the dollar values associated with the biological and physical habitats that support several commercial fisheries, a large recreational fin fish and shellfish component, and the commercial value of the shellfish harvesting done by Native Americans under various treaties. Puget Sound has become a destination resort location for water-related activities because of the availability and health of these resources. The valuation of these types of resources for recreational use has generally been done using contingent valuation methods.

7. In summary, no attempt has been made to comprehensively value the state-owned aquatic lands within Puget Sound. The annual direct revenue represents a fraction of the overall economic contribution to the state from a fraction of the total area of the Sound. Puget Sound and the Straits of Juan de Fuca contain approximately one million acres. Less than 50,000 acres of this area is under lease from the state of Washington.

/s/ Ronald F. Teissere

SIGNED AND SWORN To before me this 31st day of May, 1996, by Ronald F. Teissere.

/s/ A.W. Grimes
Notary Public in and for the
State of Washington,
Name: Audrey Wagner-Grimes
Commission Expires: 9-15-98

The United States District Court
Western District of Washington State

Honorable John C. Coughnour

Case No. C95-1096C

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,
v.
MIKE LOWRY, Governor of the State of Washington; et al.,
Defendants.

THE WASHINGTON ENVIRONMENTAL COUNCIL;
THE NATURAL RESOURCES DEFENSE COUNCIL, Inc.;
and OCEAN ADVOCATES, Inc.,
Intervenors.

AFFIDAVIT OF ARTHUR McKENZIE IN SUPPORT OF INTERVENORS' MOTION FOR SUMMARY JUDGMENT

STATE OF WASHINGTON)
) ss:
COUNTY OF NEW YORK)

Arthur McKenzie, being sworn, states:

1. I am the Director of the Tanker Advisory Center, Inc., and submit this affidavit in support of the Motion for Summary Judgment of Intervenors Washington Environmental Council, Natural Resources Defense Council and Ocean Advocates.

Qualifications

2. I have had over 60 years experience in the tanker industry. I spent 11 years at sea serving on Exxon Corporation tankers, first as a seaman and later attaining the rank of Chief Mate and obtaining my Master's license.

3. Subsequent to serving on tankers at sea, I worked for Exxon for 29 years ashore, directly and indirectly involved in the operation of oil tankers. During my last eight years with Exxon, I served as Senior Marine Advisor. While at Exxon and thereafter for the last 25 years, I have taught a 30-hour course entitled "Petroleum Tankship Operations" which over 5,000 people have completed.

4. I also founded the Tanker Advisory Center, Inc. in order to provide information on tankers and tanker operations to persons wishing to charter a tanker, understand their operational capabilities, or analyze oil transportation alternatives. Each year for the last 14 years, the Center has published an annual *Guide for the Selection of Tankers*, a reference book which reports on and evaluates over 3,300 tankers.

5. I also serve or have served on numerous tanker operation related boards including:

- The Council of Trustees of the United States Seaman's Service;
- The United States Coast Guard's Advisory Committee on Rules of the Road;
- The National Materials Advisory Board of the National Research Council, which Board prepared the report *Materials Aspects of Inert Gas Systems for Cargo Tank Atmosphere Control;* and

- The Committee on Control and Recovery of Hydrocarbon Vapors from Ships and Barges of the Marine Board of the National Research Council, which Committee prepared the report *Controlling Hydrocarbon Emissions from Tank Vessel Loading*.

6. As a result of these activities and this experience, I am extremely familiar with tanker operations and navigational needs. With reference to this litigation, I have examined:

- The State of Washington's Best Available Protection (BAP) Rules, codified at WAC 317-21, "Tank Vessel Oil Spill Prevention Plans;"
- The Model Oil Spill Prevention Plan for Tankers, prepared by the Washington State Office of Marine Safety, dated April 1995;
- The complaint of plaintiff Intertanko; and
- Other materials relating to federal and international requirements governing tanker operations.

The Washington State Best Available Protection Rules

7. I have examined the Washington State Best Available Protection (BAP) Rules. On the basis of my experience and training, as described in more detail below, I believe that: (1) these BAP rules do not conflict with any existing federal or international standards; (2) the BAP Rules will be effective in preventing oil spills and protecting the Puget Sound environment; and (3) the BAP Rules do not impose an unreasonable burden on tanker operations or tanker owners.

The Rules Do Not Conflict with Existing Law.

8. The BAP Rules impose additional – not different or inconsistent – requirements on tankers when operating in Washington State waters. While the Rules do in some ways impose requirements on tanker operators that they must follow when operating in Washington State waters that they need not follow elsewhere, a tanker following these additional requirements will not be in violation of any existing federal or international standards. The BAP Rules are thus not inconsistent with existing law.

9. Several of the Rules simply define general phrases used in other regulations. In my experience, a general qualification such as "appropriate" needs site-specific definition and the BAP Rules provide an important measure of protection in so doing. For example, while federal and international standards require security rounds as "appropriate," the BAP Rules define this as every 2 hours (or every 4 hours if the ship has certain equipment). WAC 317-21-200(4)(d). Similarly, federal law requires anchor watches at "sufficiently frequent intervals;" the BAP Rules defines these as once per hour. WAC 317-21-200(5). *See also* WAC 317-21-205(1) and (2) (defining the international "sufficiently frequently" standard for fixing location and the federal "all pertinent information" requirement for voyage planning). These site-specific definitions of general terms cannot be viewed as conflicting with other requirements, but rather simply as correctly interpreting general guidance for the given area.

The Rules Are Likely to be Highly Effective in Preventing Oil Pollution.

10. It is my opinion that the BAP Rules are also likely to be very effective in reducing casualties in the Puget Sound

area. For example, the requirements for three licensed deck officers during periods of restricted visibility, pre-arrival inspection and planning, and additional training are all likely to help prevent the types of situations which can lead to accidents.

11. The navigation watch section requires the watch to consist of two licensed deck officers at all times and three during periods of restricted visibility. WAC 317-21-200(1). Given the fact that in Puget Sound there may often be extended periods of restricted visibility and that there are work hour limitations (imposed by federal law on U.S. flag ships and extended by the BAP Rules to all tankers in Washington waters, *see* WAC 317-21-245), this requirement may necessitate an extra deck officer on board to relieve one of the others during the Puget Sound passage. This requirement should be quite effective. Tankers entering the region generally have a fairly long period traversing these inland waters bordered by these sensitive lands. For example, from the entrance of the Strait of Juan de Fuca to several of the oil terminals there is a distance of approximately 100 nautical miles. A tanker cruising at 12-14 knots (a nautical mile per hour) and slowing upon approach to the terminal could easily take 12-14 hours to make this transit. This voyage, especially during periods of low visibility, will require the careful and constant attention of deck officers. The mandate for a third officer during periods of restricted visibility to oversee general operations and to be available to relieve one of the other two, who are charged with monitoring the navigation and collision avoidance systems, is likely to significantly decrease human-caused error during these longer, stressful transits. Moreover, this third officer requirement, while it may be new for many independent tankers, is already standard practice on many oil company ships. It is absolutely the "best available technology."

12. Similarly, the pre-arrival planning and inspection requirements, WAC 317-21-205(2), -215, reasonably provide the Washington State and federal port authorities the ability to better judge the capabilities of entering ships. This information provides the authorities with additional information which would be very useful in determining whether, for example, a ship should be denied entrance, should be prohibited from entering beyond Port Angeles, requires special escort or operational limitations, or mandates other conditions. This will, in turn, help prevent unforeseen or accidental casualties causing oil pollution. The pre-arrival inspection requirements likewise protect against what, in my experience, can be frequent causes of problems – an undiscovered, but pre-existing, mechanical failure.

13. Likewise, for example, the additional training requirements, WAC 317-21-230, should better prepare the crew for emergencies. It is important to recognize that many independently owned tankers may be owned by a company in one country, for example Sweden; have officers from another country, for example India; and a crew from a third country, for example the Philippines. The crew and officers may not have much experience working together beyond the voyage they are on. In addition, the pilot is likely to be from the port country, in this case the United States. Thus, there is a great need for explicit training exercises to ensure that all personnel are aware of the ship and its operations and can communicate effectively in time of need.

The BAP Rules Are Not Unduly Burdensome.

14. The BAP Rules, while environmentally protective, are in fact not unduly burdensome. As noted above, several requirements are no different than standard operating practice on ships operated by the oil companies. Most other requirements are very similar to those being imposed in the

relatively near future by the international community; the BAP Rules simply advance the implementation date. Finally, many of the requirements, such as additional training or inspection or pre-arrival planning, are really quiet modest and, from the point of view of day-to-day tanker operations, impose a very slight additional burden.

The BAP Rules Are Necessary Due to Lack of Registry State and Industry Enforcement.

15. Washington State in some ways is the forefront of oil spill prevention. But more fundamentally, the Washington BAP Rules merely reflect an unfortunate reality of the tanker industry: that states of registry (flag states) and the tanker industry itself have failed to eliminate and remove from service the substandard and unsafe ships. For example, over a decade ago, the 14 European nations agreed in the "Paris Memorandum of Understanding" that the port states would inspect 25% of all ships. This agreement reflected consensus on the fact that the flag states and the industry themselves had failed to impose sufficient requirements on tankers, thus requiring the port states to impose additional restrictions. Recently, other countries have joined into the Paris Agreement, including Canada, the United Kingdom, Australia and South Africa. Japan and the United States are considering joining. All this reflects the same reality faced by Washington State: that the port states need to protect their resources themselves and that they cannot rely on flag states or the industry.

16. The Puget Sound area is considered to be an extremely sensitive ecological system; indeed, Washington State provides a list of particularly sensitive environmental areas but notes that for "all practical purposes, all Washington waters should be considered environmentally sensitive." *See* Model Oil Spill Prevention Plan, p. 1-12. Moreover, the

Puget Sound environment can boast of great public support and interest. On the basis of my experience with tankers in all parts of the world, I believe it consistent with international norms for a specific area or jurisdiction to assess the importance of its waters and to impose additional oil spill prevention measures for its highly prized and sensitive waters. Such site-specific requirements represent, in my judgment, a very sound accommodation of the competing interests in protection of important ecological areas and the desire for relatively uniform tanker operation standards.

Conclusion

17. For the reasons stated above, I believe that the Washington State BAP Rules are reasonable and effective measures which are not inconsistent with or in conflict with other existing tanker operation standards, will help prevent oil spills and associated pollution, and will not impose an unreasonable burden on tanker operations. The Rules are, in short, the "best available protection" and should be upheld.

/s/ Arthur McKenzie
ARTHUR McKenzie

Sworn to before me this 3d Day of June, 1996

/s/ Peter Lehner
Notary Public

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

No. C95-1096

The International Association of
Independent Tanker Owners
(INTERTANKO),
Plaintiffs,

v.

Barbara Herman, Administrator,
Office of Marine Safety, et al.
Defendants.

**DECLARATION OF SALLY ANN LENTZ
IN SUPPORT OF MOTION
FOR SUMMARY JUDGMENT**

Pursuant to the provisions of RCW 9A.72.085 and the provisions of Rule 13 of Washington State Rules of General Application,

I, Sally Ann Lentz, declare as follows:

1. I am a resident of Columbia, Maryland; a citizen of the United States; over the age of 18 years; and competent to be a witness herein.

2. International law regarding the regulation of international shipping is not uniformly accepted or applied.

a. Not all nations, nor all members of the International Maritime Organization (hereafter IMO) have ratified all treaties regarding the regulation of international shipping.

Attachment A (MEPC 37/2) is the most recent document from IMO on Status of International Conventions relating to Marine Pollution. The summary provided in the last few pages of this document clearly demonstrates that not all IMO member states have ratified the subject conventions. While most of the major flag states have ratified these conventions, as have most of the so-called "flags of convenience," they are not universally accepted. Nation states are free to "reserve" their position on specific provisions of the conventions, as well. For example, the United States has "reserved" its acceptance of Regulations 13F and 13G of Annex I of the International Convention for the Prevention of Pollution From Ships (hereafter Marpol). These regulations relate to the double hull mandate initiated by the U.S. Because U.S. law differs from these regulations in terms of the phase-in schedule for double hulls, as well as acceptance of other designs as equivalent to double hulls, the U.S. was unable to accept the international standards. Unilateral action by the U.S., as provided in this example, clearly shows that the federal government does not strictly adhere to uniformity with international standards.

The Marpol Convention itself in Article 16 (4)(b) allows a party to decline acceptance of an amendment to one of its annexes and states that, for purpose of application of that amendment, the declining state will be treated as a non-party to the convention, thereby releasing that state from the requirements flowing from the amendment. So the lack of uniformity is specifically allowed in the context of Marpol.

b. Even when ratified, the adoption of necessary implementing legislation varies.

Even when the international conventions have been ratified, there is no assurance that implementing flag state legislation has been adopted, nor that the legislation is similar

to that of other nations. The extent to which those countries which have ratified have actually adopted domestic implementing legislation is not well documented and may vary considerably.

c. International conventions that have been ratified and implemented are continually changing.

These conventions are in a constant state of "amendment." For example, Attachment B on Future Work on the Sub-Committee on Bulk Liquids and Gases (a newly formed Sub-Committee) which has the carriage of oil at sea on its agenda, indicates a major review of Annex I of Marpol, amendments to the International Convention of the Safety of Life at Sea (hereafter SOLAS) and review of existing ships' safety standards, among others.

d. Specific "guidelines" for implementing the various conventions are simply recommendations.

Many of the specific recommendations for carrying out the requirements of the conventions are simply that — recommendations in the form of "guidelines" which are not in the least bit mandatory. For example, as regards the double hull provisions of Regulation 13F of Annex I of Marpol, "interim guidelines" have been developed. Not only are these guidelines not mandatory, they are also "interim," as it is anticipated that they will be changed in the near future (See Attachment C). Also note in paragraph 14, the U.S. reservation on acceptance of the Guidelines to reflect the U.S. reservation on acceptance of Regulations 13 F and G generally.

e. An international "desire for uniformity" does not make it so.

Guidelines often refer to the "desire" for uniformity in implementation of the conventions as one basis for their development. However the guidelines merely "urge" their application by member states. Such application is not mandatory.

Indeed, none of the international agreements developed and implemented through IMO are expected to be uniformly complied with by the international shipping community, as it is up to individual member states to enact their own domestic implementing legislation to give force and effect to the convention provisions. IMO convention provisions are more often the "least common denominator," minimum standards that can be agreed upon internationally. Member states are expected (and sometimes encouraged) to enact more stringent standards. For example, under the International Convention for Safety of Life at Sea (hereafter SOLAS), individual flag states are required to adopt their own domestic implementing regulations to be applied to their registered vessels which are "at least as effective as that required by the [SOLAS Convention]" SOLAS, Ch. 1, Pt. A, Reg. 5.

f. The failure of flag states to meet their international obligations is recognized by IMO and specific efforts are underway to improve performance.

Lord Donaldson of Lymington was commissioned by the United Kingdom inn January, 1993, to examine, evaluate, and advise the U.K. government on whether international shipping standards are effective in preventing population. His report, *Safer Ships, Cleaner Seas: Report of Lord Donaldson's Inquiry into the Prevention of Pollution from Merchant Shipping* is an acknowledged treatise on this subject. As noted by Lord Donaldson, while flag states have a duty to ensure that their ships comply with international law, they are not

uniform in their determination or ability to discharge this duty.

The failure of flag states to meet their obligations under the conventions (by effective...let alone uniform...implementation) is well recognized and is the impetus behind establishment of IMO's Flag State Implementation Sub-Committee (hereafter FSI), which is tasked with improving flag state performance. Attachments D and E describe this problem. Note in particular the language in paragraphs 2 and 3 of Attachment D and paragraphs 1 - 4 of Attachment E. Both of these documents speak to the lack of uniformity in standards as they are applied to ships.

3. International enforcement is not uniform.

a. The disparity between flag states' ships "deficiencies" is dramatic.

Both implementation and enforcement of international conventions regulating shipping are not uniform. Attachment F provides some recent data on deficiency reports which suggests that some flag state's ships are more "deficient" than others. This is even clearer in Attachments G and H which provide data on the Paris Memorandum port state control program. Note in particular pages 66 - 69 – with regard to the percentage of inspections with deficiencies. On page 69 you will find that 45% of all tankers inspected were found to have deficiencies. This is an outrageously high percentage. Australia's port state control report (Attachment 1) provides similar, although not as dramatic, findings.

b. Flag state delegation to "classification societies" to ensure compliance with international standards has not solved the "deficiency" problems, nor the problem of non-uniform application.

Classification societies vary greatly in their competence and diligence. Attachments J, K, and L provide some information on delegation of authority to class societies. Attachment M is a recent article from Lloyd's List stating that only four of 13 members of the International Association of Classification Societies (IACS) have a top ranking in the U.S. Coast Guard's evaluation of class society performance. While IACs strives to ensure a high level of competence among all its members, it appears that, by the U.S. Coast Guard standards, IACS has not been entirely successful. Classification societies do not uniformly apply standards for vessels engaged in international oil commerce.

c. In the absence of effective flag state implementation, "port state control," as suggested in Lord Donaldson's Report, is the most effective way to achieve compliance with standards for safe shipping and protection of the marine environment.

Because of the failure of effective implementation of the convention standards by flag states and their delegated authorities, IMO has recently increased port state control authority. Port states, such as the U.S., the United Kingdom and Australia, are increasing their enforcement activities as a means to ensure safe shipping and protection of the marine environment. But reliance on port state control is expensive for those states, which feel that their burden is unfair. It is this inherent unfairness which drives proposals such as that put forward by the UK and Australia in Attachment D.

4. Most of the international conventions cited by the Plaintiffs have no relevance to this litigation.

a. OILPOL is no longer in force for the United States, having been superceded by Marpol 73/78. The

OILPOL Convention has no relevance to this litigation.

b. None of the BAP Regulations address any provisions within the International Convention on Load Lines (ICLL). The ICLL has no relevance to this litigation.

c. The 1982 United Nations Convention on the Law of the Sea (hereafter UNCLOS) has not been ratified by the United States, and thereby only has relevance to this litigation to the extent that it reflects customary international law.

d. COLREG provisions addressing navigational procedures are general in nature and are intended to be implemented and enforced through adoption of domestic legislation.

e. As noted above in para. 2(e), SOLAS anticipates the adoption of domestic regulations "at least as effective as that required by the [SOLAS Convention]."

f. None of the BAP Regulations directly address provisions under Marpol 73/78. That Convention, therefore, has no relevance to this litigation.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Signed at Columbia, Maryland, on June 3, 1996.

/s/ Sally Ann Lentz

Sally Ann Lentz

Sworn to before me this 3 day of June, 1996

/s/ Cathryn D. Zinkgraf
Notary Public

CATHRYN D. ZINKGRAF
NOTARY PUBLIC STATE OF MARYLAND
My Commission Expires April 20, 1998

ATTACHMENT C

INTERNATIONAL MARITIME ORGANIZATION

MARINE ENVIRONMENT PROTECTION COMMITTEE
37th session — MEPC 37/WP.3
Agenda item 14 — 12 September 1995
Original: ENGLISH

FINALIZATION OF THE INTERIM GUIDELINES UNDER REGULATION 13F OF ANNEX I OF MARPOL 73/78

Report of the Drafting Group

1. The drafting group met from 11 to 12 September 1995 under the chairmanship of Mr. M. Bockenhauer (Germany).

2. The meeting was attended by delegates from the following Member Governments

BRAZIL	NETHERLANDS
CANADA	NORWAY
DENMARK	PANAMA
FRANCE	POLAND
GERMANY	REPUBLIC OF KOREA
GREECE	SWEDEN
JAPAN	UNITED KINGDOM
LIBERIA	UNITED STATES

and observers from the following non-governmental organizations in consultative status:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO)

3. The drafting group was instructed by the Committee to make necessary editorial changes in order to finalize the Draft

Interim Guidelines given in document MEPC 37/14 (Secretariat), taking into consideration the example for the application of the Interim Guidelines contained in document MEPC 37/14/3 (Germany).

4. The drafting group reviewed documents MEPC 37/14 and MEPC 37/14/3 and made editorial corrections to the text of the Interim Guidelines, as set out in the Annex.

Comments on editorial corrections

5. The title of the Interim Guidelines and the covering MEPC resolution for their adoption has been harmonized with the text of regulation 13F(5) of Annex I of MARPOL 73/78.

6. In paragraph 3.1, the word 'IMO' has been replaced by 'MEPC' in accordance with the text in regulation 13F(5).

7. In paragraph 3.2.5, a reference has been made to paragraph 6.2 relating to the verification of computer programme.

8. In paragraph 5.2.2, the missing functions have been inserted.

9. In paragraph 6.2.1, a reference has been made to the "Example for the application of the Interim Guidelines" and the annex of MEPC 37/14/3 has been incorporated as appendix to the Interim Guidelines.

10. Since Appendix 2 mentioned in paragraph 6.2.2 has not yet been developed, as an interim solution, the test of this paragraph has been corrected to read that the computer programme for the oil outflow analysis should be verified against the data for the oil outflow parameters for the reference double hull designs given in section 7. A reference to this paragraph has been made in paragraph 3.2.5 as mentioned in paragraph 7 above.

11. The group agreed to maintain "Reference Double Hull Design No. 4.2" as "Reference Double Hull Design No. 4" and to modify Tables 7.1 and 7.2 accordingly. Therefore, also Fig. 8.1 and Fig. 8.2 have been replaced by a new Fig. 8 on "Reference Double Hull Design No. 4 Deadweight: 283000 tdw", attached to this report.

Need for further work

12. The group is of the view that there is a necessity to elaborate a new Appendix containing examples for verification of the computer programme and this matter should be reviewed by the BLG Sub-Committee.

13. The group is of the opinion that the data of the original "Reference Double Hull Design No. 4.1" should be referred to the BLG Sub-Committee for future work on this subject.

14. The United States noted that the ultimate goal of pollution prevention regulations is to eliminate oil outflow from damaged tankers. The United States expressed the view that the weighing factor, k_1 relating to the probability of zero oil outflow, should be significantly higher than what is proposed in the Interim Guidelines. Accordingly, the United States reserved its position on the Interim Guidelines because they will permit alternative design and construction of oil tankers which could result in oil outflows in minor and low energy accidents. In no way could such designs be considered equivalent to the degree of protection afforded by the double hull tankers.

Action requested of the Committee

15. The MEPC is requested to approve the report of the drafting group, in general, and, in particular, to:

.1 approve the Interim Guidelines for approval of alternative methods of design and construction of oil

tankers under regulation 13F(5) of Annex I of MARPOL 73/78 given in the annex to MEPC 37/14 after incorporating therein the editorial corrections given in the annex to this report;

.2 adopt the Interim Guidelines by MEPC resolution contained in the annex to MEPC 37/14 after incorporating therein the editorial corrections given in the annex to this report; and

.3 consider the necessity to elaborate a new appendix containing examples for verification of the computer programme and to instruct the BLG Sub-Committee, as decided.

ATTACHMENT D

INTERNATIONAL MARITIME ORGANIZATION

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION — FSI 4/3/3
4th session — 19 January 1996
Agenda item 3.1 — Original: ENGLISH

IMPLEMENTATION OF IMO INSTRUMENTS

Responsibilities of Governments under safety and pollution prevention conventions

Flag State responsibility

Submitted by the United Kingdom and Australia

Background

1. This paper develops the proposals in the United Kingdom's paper FSI 3/3/5, as requested by the third session of the Sub-Committee.

2. It is widely known that substandard ships are operating internationally and the Secretary-General referred to it in his most recent World Maritime Day address saying:

> "Some governments are also quite happy to take the fees for registering ships under their flag but fail to ensure that safety and environmental standards are enforced".

This view is reflected by the experience of port States. In addition to the safety and environmental risks associated with the operation of substandard ships, their owners and operators are able to operate at an unfair competitive advantage.

3. The Annex to resolution A.740(18) which sets out the responsibilities of flag States provides useful guidance, and its value will increase as it is further developed by the Sub-

Committee, but the requirements of a resolution cannot be binding. We are concerned that the present situation does little to discourage substandard shipping: there is no sign that the activities of FSI are leading to a measurable improvement in safety. We consider that a mechanism is required that would ensure that flag States met their responsibilities under safety and pollution prevention Conventions.

Possible options for ensuring that flag States meet their responsibilities

4. We believe that to ensure that flag States meet their responsibilities would either require amendments to existing conventions or the development of a new convention. It is considered that there are four possible approaches:

(i) amend the United Nations Convention on the Law of the Sea;

(ii) amend the United Nations Convention on the Registration of Ships;

(iii) amend the existing IMO safety and pollution conventions (SOLAS, MARPOL, Load Line, etc.);

(iv) develop a new treaty instrument spelling out the rights and obligations of parties in relation to their responsibilities as flag States.

The United Nations Convention on the Law of the Sea (UNCLOS)

5. The United Nations Convention on the Law of the Sea (UNCLOS) addresses some aspects of the responsibilities of flag States. Article 94 sets out the duties of a flag State. This requires each State to conform to generally accepted international regulations, procedures and practices and to take any steps which may be necessary to secure their observance.

It also provides for other States to report deficiencies to the flag State. Article 217 requires that States ensure compliance by vessels flying their flag with applicable international rules and standards and provide for the effective enforcement of such rules, standards, laws and regulations, irrespective of where a violation may occur.

6. UNCLOS however contains no mechanism to implement and enforce the relevant safety and environmental provisions of IMO Conventions on ships registered with the flag State. And whilst it sets out in quite general terms the duties of a flag State, it does not amplify or explain what is required of a flag State in terms of technical expertise or administrative capability. A further consideration is that the Convention does not come within the scope of IMO and any amendment would have to be considered in accordance with the requirements of UNCLOS itself.

7. However, Article 311 (Relation to other conventions and international agreements) provides for other agreements setting out rights and obligations which are compatible with the provisions of UNCLOS. We consider that UNCLOS is not the appropriate vehicle for developing more clearly defined safety related obligations on flag States and another instrument should be used, provided it complies with the requirements of UNCLOS.

United Nations Convention for Conditions of Registration of Ships (UNCROS)

8. Article 5 of UNCROS requires flag States to have a competent and adequate national maritime administration, which is subject to the control of the State. However it contains no objective criteria against which a flag State can assess the competency of its maritime administration.

9. Furthermore, only a small number of States have signed or ratified UNCROS and it is not likely to come into force because of States' concerns about provisions unrelated to flag State responsibility. It cannot be amended before it comes into force and, like UNCLOS, it does not come within the scope of IMO. These are significant difficulties in using UNCROS as a mean of producing an instrument that effectively attributes responsibility to flag States.

Amendment of Existing IMO conventions

10. Whilst the existing IMO conventions on safety and pollution prevention could be amended to incorporate effective provisions on flag State responsibility, to do so would be very complex. Each Convention would have to be considered and amended individually. This would be extremely resource intensive and could interfere with work on safety or pollution amendments. Also there is no certainty that consideration of the amendments would progress at the same speed or maintain consistency, thus resulting in the risk of considerable confusion.

11. The amendments needed would be detailed and complex and there could be some difficulty in amending the Conventions in sufficient detail to ensure that the complex sovereignty issues could be adequately addressed.

Develop a new instrument

12. IMO has an excellent record for developing new instruments which are achieved by consensus and subsequently widely accepted and implemented. Development of a new instrument within IMO would have a number of significant advantages. These include:

- building on the work already done in drafting resolutions A.740(18) and A.739(18) together with

other relevant documents and standards;

- taking account of recent developments in the shipping industry, particularly the changing relationship between flag States, shipowners and shipmanagers;
- discussion within the forum which is concerned with the technical aspects of flag State responsibility, thus facilitating compatibility with other relevant Conventions;
- coming within the responsibility of IMO and being subject to the IMO procedures thus enabling its status to be considered regularly.

Primary Objectives of New Instrument

13. We consider that the best approach to improving flag State compliance would be the development of a new treaty, the technical provisions of which would be based on resolutions A.740(18) and A.739.(18). We accept that this would be a long-term project and that this should not interfere with other efforts to provide guidance and assistance to flag states in meeting their obligations.

14. The primary objectives of such an instrument would be:

(i) to set out clearly the responsibilities of the flag States and criteria against which their operation could be measured;

(ii) to provide a mechanism for the assessment of the operation of flag States by using objective criteria;

(iii) to facilitate the targeting of technical co-operation to those States unable to comply with the agreed criteria;

(iv) to identify measures, including sanctions, that may be necessary to ensure that States fulfil their obligations and responsibilities as flag States.

15. It is accepted that some States do not fulfil their obligations because of lack of appropriate resources in their marine administrations. Funding is available from a number of sources which could be used to assist flag States in meeting their obligations with respect to safety and pollution prevention conventions. One of the reasons that such funds have not been able to be deployed so far is the ability to specify clearly the aims of such assistance and objective criteria against which to measure the benefits.

16. Technical co-operation is a two-way process and it should be possible to incorporate a mechanism within the scope of a treaty by which flag States can be assessed and donor States can be satisfied that co-operation is targeted to States that take their flag State responsibility seriously. The existence of objective, agreed criteria for the operation of flag States, against which they could be measured would also enable the IMO technical co-operation programme to be deployed more effectively.

17. An outline of the provisions of a treaty likely to achieve the objectives of an effective new instrument is set out at annex.

18. The Sub-Committee is invited to consider the above proposals and develop them further in the course of FSI 4 and recommend to the MSC and MEPC that a new treaty instrument be developed which will ensure compliance by flag States with IMO safety and pollution prevention instruments.

* * *

ATTACHMENT E

ANNEX

DIRECTORATE FOR SCIENCE,
TECHNOLOGY AND INDUSTRY
MARITIME TRANSPORT COMMITTEE

NON-OBSERVANCE OF INTERNATIONAL
RULES AND STANDARDS:
COMPETITIVE ADVANTAGES

ORGANISATION FOR ECONOMIC CO-OPERATION
AND DEVELOPMENT
Paris, January 1996

FOREWORD

1. The majority of shipowners operate their vessels fully in accordance with international rules and standards. However some shipowners, due to the freedom to determine operating standards, operate their vessels at a substandard level. As a consequence, they enjoy a financial advantage which can reach a substantial amount of the running cost of the vessel. This situation occurs because there is often a lack of ensuring and/or monitoring compliance with international rules and standards as well as insufficient penalties for non-observance of international rules and standards compared to the financial advantages gained.

2. There is no simple solution to combat non-observance of agreed international rules and standards. Preventive and curative measures must be combined. Lasting solutions necessitate a co-ordinated co-operation of all participants in international shipping operations: flag State and port State authorities, classification societies, chartering and marine insurance interests, maritime labour unions.

NON-OBSERVANCE OF INTERNATIONAL RULES AND STANDARDS: COMPETITIVE ADVANTAGES[1]

1. In recent years, the shipping industry has been characterised by increasing concern over falling standards of vessel operations by a number of shipowners. This concern has been expressed by insurers, characters, governments and other interested parties, and has given rise to increased efforts to ensure shipowner compliance with national and international maritime rules as evidenced by greater frequency of ship inspections by insurance, chartering and port State interests.

2. In spite of this tightening-up process, shipping is still a largely free market which allows considerable scope for shipowners, *inter alia*, to: i) determine vessel operating policy including the level of expenditure on safety-related maintenance cost items, and ii) avoid compliance with internationally agreed rules and regulations as regards safety and the protection of the marine environment.

3. This latter situation is allowed to occur because the different bodies in charge of ensuring and/or monitoring compliance (flag State and port State authorities, classification societies, chartering and marine insurance interests and the maritime labour unions) vary in the degree of diligence they apply when conducting such activities and when following-up any non-observance of international rules and standards so detected.

---

[1] This report is based on a more detailed OECD general distribution document (ref. OECD/GD(96)4) which is available from the OECD Maritime Transport and Shipbuilding Division.

4. The net effect of this approach is that, while the world fleet is now subject to a greater number of inspections that perhaps at any time in the shipping industry's history, standards of vessel operation vary considerably from the highly professional shipowners, who take a long-term strategic view towards the crew and technical management of their fleets, to the unscrupulous owners who disregard even the basic requirements of safe and pollution free vessel operations.

5. The aim of this report is to assess the competitive cost advantages which can be enjoyed by those owners who do not observe the fundamental maritime rules and standards relating to shipboard safety and environmental protection. Furthermore, it examines the respective roles of the industry bodies responsible for monitoring international rules and standards and discusses some of the possible solutions to the continuing problem of some shipowner non-observance.

I. FINANCIAL ADVANTAGES LINKED TO THE NON-OBSERVANCE OF AGREED INTERNATIONAL RULES AND STANDARDS CAN REACH A SUBSTANTIAL AMOUNT OF THE RUNNING COSTS OF A VESSEL

Financial advantages obtained by running vessels at different operating standards

- Considerable scope exists for shipowners to determine the operating standards of their vessels and to deliberately avoid compliance with international rules and standards which govern safety and pollution prevention in the shipping industry. By so doing, shipowners obtain financial benefits which can equate to a significant percentage of total vessel operating costs.

6. Deteriorating freight rates, financial pressures and increased competition have led some shipowners to cut back expenditure, *inter alia,* on the maintenance of vessels. Safety costs money and shipowners or operators incur expenditure in four main safety-related areas:

i) in providing for the maintenance of the vessel in a technically sound and seaworthy condition including the timely supply of necessary stores and supplies and regular overhauls/inspections of navigation, cargo handling, engine room and other machinery and equipment;

ii) in ensuring that life-saving appliances, fire-fighting equipment and other safety items are kept in a state of readiness;

iii) in providing appropriate training of seafarers and office staff including regular drills and exercises;

iv) in establishing and maintaining a well-organised and disciplined safety management system (SMS), encompassing both ship and shore operations, including regular safety inspections, internal audits, management reviews and report/follow-up of accidents, incidents and deficiencies.

7. There are no hard and fast rules to determine how much an owner/operator should spend on vessel safety in order to conform to international rules and standards and, often, no separate budget for safety or training is maintained. Much depends on the age and type of vessel, its trading pattern and the experience of the crew. Therefore, it is difficult to establish, with any precision, during a shipboard inspection, whether too much or too little is being spent on safety and, in the latter case, how much is needed in order to rectify any observed deficiencies.

8. Vessel operating standards vary considerably from the "blue chip" shipowners who choose to maintain vessels at a very high standard, i.e. far in excess of the minimum required by the vessel's class, flag State and any additional requirements of insurers, charterers or financiers, to those owners who, for whatever reason, choose to maintain their vessel at the minimum standard acceptable to continue trading legally or deliberately below. The financial implications of the freedom enjoyed by shipowners in determining vessel operating policies is illustrated by the following diagram in terms of theoretical vessel operating levels. It depicts maximum (ceiling) and minimum (floor) levels of expenditure in relation to "good" and "common" (or average) practice within the shipping industry.[2]

9. For example, for a late 1970s built bulk carrier (30 000 dwt) operating within the current handy size time charter market, different levels of operating costs depending on safety levels, with a crew of identical size and nationality can be defined. Important differences in the operating costs exist. If the vessel is operated at the maximum level of safety, per day expenditure will amount to around US$7 500. If, however, the vessel is kept operational at a level just to ensure the owner's compliance with basic standards of safety, the daily expenditure will only amount to some US$3 250.

---

[2] The data cited in this report, while based on actual figures obtained from industry sources, should be considered as purely indicative and reflect a given situation at a given time.

VESSEL OPERATING COST "LEVELS" AND FINANCIAL ADVANTAGES

(period of reference: end 1994)

(20 year old bulk carrier; 30 000 dwt) US$/Day		**(1990 built product tanker; 40 000 dwt) US$/Day**
7 500	Ceiling (1)	9 500
4 500	Good Practice (2)	4 850
3 750	Common Practice (3)	4 250
3 250	Standard (4)	3 750
2 750	(6) Floor (5)	3 100

(1) Ceiling = level of maximum expenditure (influenced by financial revenue earning potential of the vessel in the freight market and financial costs of owner).
(2) Good Practice = high level of expenditure adopted by minority of shipowners.
(3) Common Practice = average level of expenditure adopted by majority of shipowners.
(4) Standard Practice = minimum level of expenditure to ensure owner's compliance with basic standards of safety.
(5) Floor = level of minimum expenditure (still keeping the vessel "operational").
(6) Shaded area = margin of substandard operation which the shipowner is able to operate a vessel subject to non-detection by regulatory authorities (flag States and classification societies acting on behalf of flag States, port States, etc.).

10. But what is more important in relation to the safety of navigation and the prevention of pollution of the marine environment is the difference between the level which corresponds to the minimum level of expenditure to ensure owner's compliance with international standards, and the so-called "floor level", which corresponds to the minimum expenditure keeping the vessel operational. There exists a "shaded area" within which a shipowner can operate substandard vessels[3] subject to non-detection by one or a number of regulatory authorities (flag States and classification societies acting on their behalf, port States, etc.). The margin of substandard operation for such a vessel ("shaded area") can equate to a 13 per cent saving (US$ 500 per day or US$ 182 500 per year) on the annual running cost. Similarly for a 40 000 dwt 1990 built product tanker working within the time charter market, the margin of substandard operation equates to US$ 650/day or US$ 237 250/year, equating to a 15 per cent saving on the annual running costs.

* * * *

[3] Substandard vessels deserve the qualification "substandard" purely on the basis of shipboard and shorebased management, levels of maintenance and training of the ship's crew not being in accordance with agreed international rules and standards.

II. LACK OF POLICING OF THE SHIPPING INDUSTRY BY PRIMARY POLICING BODIES (FLAG STATES AND CLASSIFICATION SOCIETIES ACTING ON THEIR BEHALF) AND INSUFFICIENCY OF PENALTIES FOR NON-OBSERVANCE OF RULES AND STANDARDS

The role of the flag State

- It is the responsibility of the flag State to identify instances of substandard operation which pose a serious risk to safety of life at sea and the protection of the marine environment. However, frequently, flag State Administrations are not in a position to fulfil their responsibilities in implementing international rules and standards either directly or indirectly through classification societies. No attempt has yet been made to standardise the way in which flag State inspections should be conducted, although the examination of different ship registers reveals similarities in their approaches.

18. Flag States, in order to comply with existing internationally agreed rules and standards, as laid down in the Law of the Sea text, have effectively to exercise jurisdiction and control in administrative, technical and social matters over ships flying their respective flags. In particular, flag States are required to take the necessary measures to ensure safety at sea, including the manning of ships, labour conditions and the training of crews, the construction, equipment and seaworthiness of ships. Flag States are furthermore also obliged to ensure that each ship is in charge of a master and officers who posses appropriate qualifications. However, there is growing evidence showing a strong correlation between marine casualties and certain flags of registration. There are still a number of flag State

Administrations not adhering to minimum standards of supervision.

The role of classification societies

19. In the absence of flag State inspections, classification societies, acting on behalf of flag States, have an important State's enforcement powers behind them, which could effectively mean much swifter penalties for non-compliance, for example the inability of ships to leave port when their certificates are not in order. The ultimate sanction for non-compliance with the classification rules is the loss of class, which is the basis for charter parties and insurance. Due to different standards among the various societies owners can "shop around" to keep their vessels in class despite the inability to meet the rule requirements of the "holding" classification society. However, it should be noted that through IACS' (International Association of Classification Societies Ltd.) recently concluded Transfer of Class Agreement it has been agreed that the gaining society accepts the vessels for its classification only after all overdue surveys, recommendations or conditions of class previously issued against the vessel have been completed as specified by the losing society.

The insufficiency of penalties

- Given the present legal framework, penalties applied to substandard vessels are, if they exist at all, relatively low compared to the advantages obtained from non-observance of international rules and standards.

20. In the present legal framework there is no provision to apply penalties when a vessel is detected with deficiencies, unless the deficiency represents a breach of conventions containing a repressive mechanism (MARPOL, for instance). The only penalty applied is the detention of the vessel.

However, detention is not a strong deterrent. In the example cited above, the off-hire statement shows a financial cost of approximately US$ 16 000. Compared with the daily US$ 500 of financial benefit for owners who operate the vessel at the floor level, this represents only 32 days of operation.

21. There are, at least, two main reasons as to why administrative penalties should be applied. On the one hand, this would contribute to eliminating the cost advantages of running a substandard ship. On the other hand, this would transfer the cost of control from the port authorities to the shipowner. Considering that an average visit requires two inspectors for two hours, Members of the Memorandum of Understanding (MoU) estimated in 1992 that the average cost of a visit amounts to 240 ECUs.[5] As the port authorities of the MoU carried out 17 294 inspections during 1993,[6] this means that, in 1993, port authorities invested at least 4 million ECUs for inspections, although it has to be noted that the overall cost of the inspections accrued to the port State are significantly higher.

22. However, when deficiencies are detected, certain states impose fees for the subsequent inspection of vessels. These fees are based on the assumed cost of the visit (60 ECUs per man per hour). This practice remains an exception.

23. Typical deficiencies detected during annual flag State/classification society inspections demonstrate that, while the majority are of a minor nature involving only small cost savings, certain major deficiencies can involve substantial

---

[5] See The Memorandum of Understanding on Port State Control, Annual Report 1992, page 4.

[6] See the Memorandum of Understanding on Port State Control, Annual Report 1993, page 29.

financial implications, particularly if they should have, but due to non-detection have not, resulted in an immediate disruption in the vessel's ability to trade. Existing penalties for substandard operations are no deterrent: on the contrary, if existent at all, their low level is almost an encouragement to operate substandard, as savings by operating below international norms and standards by far outweigh any penalty.

III. LASTING SOLUTIONS TO COMBAT NON-OBSERVANCE OF AGREED INTERNATIONAL RULES AND STANDARDS NECESSITATE CO-ORDINATED CO-OPERATION OF ALL PARTICIPANTS IN INTERNATIONAL SHIPPING OPERATIONS

IMO initiatives to improve international rules and standards and their implementation

- IMO being the prime body for the adoption and the implementation of international rules and standards, its work is of the utmost importance for the upgrading of flag State inspections;
- All IMO initiatives for a better monitoring of the implementation of international rules and standards, and an improved co-ordination of the actions against substandard vessels, should be welcomed;
- By providing owners and operators with a useful industry-wide organisational framework, the ISM Code represents the latest example of a policy towards the improvement of minimum standards of safety and the phasing out of substandard vessels.

24. There is a compelling case for all flag States to demonstrate that they are carrying out their supervisory

responsibility effectively as non-compliance with international rules and standards leads to unfair and thus unacceptable competition. In accordance with decisions taken in the International Maritime Organisation, flag States have to live up to their obligations and make transparent the work of their maritime administrations with regard to how they implement and comply with IMO conventions and rules on safety and pollution control.[7]

25. The monitoring and harmonisation of flag State implementation of IMO rules and conventions would contribute to a better co-ordination of flag States and classification societies acting on their behalf. In particular, the creation of a common database showing the safety status and record of vessels (ISI - International Ship Information - database) will effectively enhance the efficiency of the fight against substandard operation.

26. Safety requirements need permanent upgrading. In this field, the implementation of resolution A.741 (18) – the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) – is of the utmost importance as it represents the latest attempt to improve minimum standards of safety. Proper implementation of the ISM Code will undoubtedly lead to a phasing out of a number of substandard vessels and thus contribute to a "level playing field" among shipowning companies. Since the introduction of the ISM Code, an increasing number of

---

[7] See Statement by OECD Member countries on the Enforcement of International Rules and Standards in Maritime Transport [SG/PRESS(94)53]. In addition to OECD Member countries the following additional countries have subscribed to the statement: Bulgaria, the Czech Republic, Estonia, Hungary, Korea, Latvia, Lithuania, Poland, Romania, Russia and the Ukraine.

shipowning and operating companies have committed greater resources to "upgrading" their existing management systems.

Port State inspections should be further strengthened and better co-ordinated

- Findings of vessel inspections, as conducted by flag States and classification societies acting on their behalf, demonstrate that there is still considerable room for improvement, both in terms of the technical condition of vessels and ship operating practices;
- Shortcomings, of the effectiveness of vessel inspections by certain flag States and classification societies acting on their behalf, force OECD Member countries to call for improved and better co-ordinated port State inspections;
- Enforced port State inspections would eliminate substandard vessels and competitive advantages obtained by shipowners who do not observe international rules and standards.

27. Given the ineffectiveness of certain flag State/classification society inspections, the Port State Inspectorates are now widely viewed as a very, if not the most, important policing mechanism for the shipping industry, which must continue to act as a "safety net" for the flat States. Port State inspectors, while not carrying the same responsibilities as those of the flag States, are able to investigate in detail the various safety aspects of vessels; they go much further than just a mere double checking of a ship's certificates by examining areas such as crew competence. They are also able to act on any deficiency noted, by preventing a vessel from proceeding on its voyage and by notifying the flag State and next port accordingly of any significant deficiencies.

28. Port States, as well as flag States, should adopt the necessary measures to make it more difficult to obtain the financial advantages enjoyed by those shipowners who do not observe international rules and standards. These measures should be sufficient to minimise or ideally offset the financial advantages resulting from the operation of substandard vessels. Consideration should be given to increasing the effectiveness of port control, *inter alia,* by:

i) tighter inspection rules;

ii) elaboration of a common policy on harmonisation of detention criteria and detainable items;

iii) a possible wider and co-ordinated geographical coverage of port State inspections;

iv) an increase in random checks;

v) the assessment of the port state of the human element;

vi) improved follow-up of corrective actions;

vii) a greater transparency and increased publication of instances of substandard operations list of vessels);

viii) adapted numerical staff and intensified training efforts for port inspectors.

The responsibility of the industry in combating non-observance of international rules and standards

- There is no simple solution to the problem of substandard ship operation. Greater policing alone will not prevent substandard vessel operations: it is necessary to combine preventive and curative measures;

- The industry has an important policing role to play in co-ordination with flag States and classification societies acting on their behalf effectiveness is dependent on good co-operation among the various participants in maritime transport including the harmonisation of how inspections are conducted and, importantly, how corrective actions are followed up;

- The industry has to commit greater resources to preventing problems occurring in the first place rather than on corrective action.

29. The immediate concern is to improve the involvement of the industry in preventive actions. In 1993 this safety and quality management "movement" accelerated with the IMO's adoption of resolution A.741(18) - the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code). Based on this understanding, a more organised Safety Management System-type approach to shipboard safety has been brought about in recent years, together with the development of quality standard management systems. However, the movement towards an SMS-type approach is still in its early stages and while more and more ship-owning and ship-operating companies are committing greater resources to safety management, the dissemination of the SMS-approach throughout the industry is proving to be a slow one. A major reason for this is that safety management is not, as yet, a mandatory requirement.

30. As a result of a new chapter (IX) of SOLAS, compliance with the ISM requirements will be mandatory for certain ship types from July 1998. This represents a milestone in the industry as it determines, for the first time, a minimum standard of safety management and pollution prevention encompassing shipboard and office operations.

31. Insurers and charterers are now playing an active role in monitoring compliance with international rules and standards in order to have a more reliable basis for the protection of their commercial interests. Greater co-operation within the industry, including maritime unions, and between the industry and flag States and classification societies acting on their behalf, including the exchange of information, should favour the high standard vessel operators.

32. Until such greater involvement of the industry is achieved and international rules and standards are stringently observed, the shipping industry will be characterised by what is a two-tier market in ship operating standards. The upper tier comprises those owners who take a responsible attitude to safe ship operations and enjoy, as a result, access to most charterers and trade routes. The lower tier, by contrast, is made up of owners and operators who continue to circumvent or ignore accepted rules and regulations and who will be targeted more and more in the future to undergo shipboard and office inspections and who will be afforded limited access to certain trades and charterers.

ATTACHMENT TO
DECLARATION OF DARIN BARTRAM

STATE OF WASHINGTON

OFFICE OF MARINE SAFETY

August 30, 1993

Rear Admiral A.E. Henn
Chief, Office of Marine Safety
Security and Environmental Protection
U.S. Coast Guard Headquarters
Room 2408
2100 Second Street S.W.
Washington, D.C. 20593

Dear Admiral Henn:

This will acknowledge that your letter of August 25, 1993 has been received by this office. We are concerned and troubled by your letter at this late date and feel compelled to provide the following response. I very much regret that your office has reduced our communications on this issue once again to an eleventh-hour fax exchange.

We are troubled by the apparent inability of the Coast Guard to maintain a dialogue with the State of Washington on these issues. Your letter yesterday is a mirror image of events which occurred just two months ago.

In that case, Washington State contingency plan requirements, effective July 1, 1993, were long on the books, widely distributed in the maritime community, and well known by the Coast Guard. Yet, our first official notice from the Coast Guard came in your letter of June 23, 1993 (one week before the rules took effect) expressing objections similar to the ones you pose now to OMS prevention rules. It was your position

then that our office should follow the Coast Guard's lead and impose no contingency plan requirements on in-transit vessels pending Canadian action. As you know, the Canadian spill response program is anticipated to take two years to implement. Through some creative solutions fashioned by Washington State, we were successful then in avoiding jurisdictional conflict while at the same time protecting Washington waters.

Significantly, however, at that time I advised of the September 3 deadline for prevention plans and requested a meeting to discuss this issue and to work cooperatively toward a solution. After a month of no response, I requested meetings with Captains Donohoe and Russell whom I understood were authorized to speak for the Coast Guard on these issues.

My meeting with Captain Donohoe on August 19, 1993 in Seattle was uneventful. Captain Donohoe did not know what the problem was and seemed understanding of Washington State's desire to gather information from vessels in Washington waters for oil spill prevention purposes. He said he would discuss these issues with you upon his return to Washington D.C. and advise further.

Captain Russell was unable to meet with me at the scheduled time on August 23, 1993. During a telephone conversation, he subsequently urged me to talk with Captain Donohoe and I requested that a message be given to Captain Donohoe to call me. The next day Captain Donohoe called to advise that a letter was being faxed to us and that he preferred not to talk with us until after we had received the letter. At that point, again, one week before the impending deadline, we received a letter from you raising jurisdictional issues, suggesting litigation, requesting that we not enforce Washington State oil spill prevention laws, and suggesting that we work together to solve this problem.

This series of events does not represent the type of partnership between the federal government and the state of Washington we believe is appropriate to protect the public interest in oil spill prevention programs.

Throughout our rulemaking process, we have worked closely with the state Attorney General's office on the legal issues you have raised. We have been advised by counsel that Washington State law in this situation is valid. Legal advice from that office making clear the validity of Washington's laws and regulations will be available shortly.

Washington State's oil spill prevention laws provide an opportunity, not a problem, for enhancing now this region's spill prevention programs. Our office is mandated by the Legislature to establish "best achievable protection" standards for tank vessels transiting Washington state waters. Under our regulations, all tank vessels must file on September 3, or prior to operating in Washington waters, information describing the vessel's current prevention measures and procedures. This office will review submitted material to establish "best achievable protection" standards. This phased and studied approach to prevention planning will benefit all jurisdictions in devising new strategies for preventing oil spills from tank vessels operating in shared waters.

This is not an instance of Washington State extending jurisdiction to the territorial seas. Vessels in question have entered and are transiting Washington State internal waters. The particular resources at risk, the Strait of Juan de Fuca and the San Juan Islands, are proposed for National Marine Sanctuary designation by NOAA and are among the most environmentally significant marine resources in the State. The notion that Washington State officials should suspend implementation of state spill prevention laws to attend committee meetings while a substandard oil tanker, licensed

by a flag of convenience, is weaving its way through the San Juan Islands is not an acceptable proposal to the citizens of this state.

Significantly, so far as we are aware, Canada does not at this time have comparable prevention programs. We are aware of ongoing discussions at the international level which may lead to some program in the future. The bottom line is that Washington State is offering a spill prevention program for these waters and is attempting to provide this protection now, when it is needed, and without further delay.

Your request that Washington State waive application of state spill prevention laws and instead attend committee meetings designed to lead to some future international standards is not well taken. If a comprehensive and effective international regime existed for oil spill prevention, our office would not exist. It has been the failure of the international community to establish and enforce effective international prevention programs that has driven states like Washington to take these matters in their own hands and establish programs necessary to protect state waters.

As you know, Congress debated preemption at length and made the decision to allow states the freedom to protect their waters. We are committed to a partnership with the Coast Guard toward coordinated and cost effective programs and are pleased with the cooperative stance which the Thirteenth District has taken with respect to our programs. Quite frankly, we are frustrated with the focus the Coast Guard in Washington D.C. is placing on jurisdictional issues, litigation, and posturing for our Canadian neighbors, rather than on cooperation and environmental protection.

We remain committed to working with you on solutions, but these solutions must recognize the valid oil spill prevention

programs of the state of Washington as well as long-term international solutions.

At the current time, we will expect on September 3, 1993 that all tank vessels operating on Washington State internal waters will be in compliance with Washington State law.

Sincerely,

/s/ Barbara Herman
Barbara Herman
Administrator

BH:bjj
cc: Admiral John W. Lockwood

STATE OF WASHINGTON

OFFICE OF THE GOVERNOR

August 30, 1993

Commandant (G-C)
J. William Kime
United States Coast Guard
2100 Second Street S.W.
Washington, D.C. 20593-0001

Dear Commandant Kime:

I write to express the strong commitment of the state of Washington to enforce state oil spill prevention laws, to work in a partnership with the U.S. Coast Guard to advance international tanker safety standards, and to protect Washington State waters now from the ever-present threat of a worst case oil spill. I am alarmed, however, at correspondence received last week from the Coast Guard which threatens to undermine that partnership.

While some six billion dollars are being spent by government and industry making much needed improvements to this country's oil spill response capability, I am extremely proud that the state of Washington is the national leader in adopting and implementing oil spill prevention legislation. Our Office of Marine Safety, less than two years old, is on the cutting edge of developing nationally innovative oil spill prevention programs. Foremost is a requirement mandated by our Legislature for all oil tankers operating in Washington waters to submit oil spill prevention plans to that office by September 3, 1993.

In Admiral Henn's August 25, 1993 letter, the Coast Guard is requesting, one week before the September 3 deadline, that Washington State suspend application of valid state laws

designed to prevent oil spills in Washington's most environmentally sensitive areas, the Strait of Juan de Fuca and the San Juan Islands. Instead, the Coast Guard recommends that state representatives attend committee meetings which may eventually lead to new international prevention standards. This Coast Guard proposal is totally unacceptable to the state of Washington.

The U.S. Coast Guard must support principles of international law and work cooperatively with our valued Canadian neighbors. Washington State strongly supports your efforts and appreciates and accepts the Coast Guard's invitation to participate in international forums designed to establish new and needed regulatory standards for tanker safety. The very purpose of Washington State's new prevention laws, however, is to provide protection now in Washington State waters. This goal is not inconsistent with mutual ongoing efforts toward long-term international solutions.

Washington State is simply unable and unwilling to wait for the long and often cumbersome international process to run its course while areas like the San Juan Island lie at risk today of a potentially worst case spill that could devastate Washington State's most environmentally sensitive areas.

I urge the U.S. Coast Guard to reconsider its present course. In doing so, I pledge the complete effort of Washington's Office of Marine Safety to work cooperatively with the U.S. Coast Guard and to seek solutions to your jurisdictional concerns, while pressing forward with Washington State oil spill prevention programs.

Very truly yours,

/s/ Mike Lowry
Mike Lowry
Governor

ML:BH:bjj
cc. Washington State Congressional Delegation
Rear Admiral A. E. Henn, U.S. Coast Guard
Rear Admiral John W. Lockwood, U.S. Coast Guard
Barbara Herman, Administrator, Washington State Office of Marine Safety

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

SECOND AFFIDAVIT OF STANLEY J. NORMAN

STATE OF WASHINGTON)
) ss.
County of Thurston)

My name is Stanley J. Norman, Commander, United States Coast Guard (retired), and member, Nautical Institute. I am the Program Director for Policy and Planning at the Washington State Office of Marine Safety (OMS). I am a citizen of the United States, over the age of 18, and competent to provide testimony in this matter. My complete background is set forth in the Affidavit of Stanley J. Norman which was attached to the State Defendants' Motion For Partial Summary Judgment (hereafter "1st Norman Aff.").

This affidavit is filed in response to Intertanko's Motion For Summary Judgment.

I. *Coast Guard Involvement In The Best Achievable Protections Standards Development Process*

The U.S. Coast Guard was represented and participated in the Office of Marine Safety's development of Best Achievable Protection (BAP) standards from the very beginning of the process. When the Washington State Advisory Group on best achievable protection standards for tank vessels was formed and chartered, the U.S. Coast Guard Thirteenth Coast Guard District Marine Safety Office provided a representative to participate on the Advisory Group, Coast Guard Lieutenant Commander Tom Orzech, who attended all of the meetings. In addition to Commander Orzech's participation, he reportedly took the minutes of the meetings, all the drafts developed on standards and on rules, and between the meetings provided those to the Marine Safety Office at U.S. Coast Guard Headquarters in Washington, D.C. for comment. When the materials arrived at U.S. Coast Guard Headquarters, Captain Brian Basel copied them and distributed them to all affected offices throughout Coast Guard Headquarters, requested comments, and when comments were received, referred them to Commander

Orzech who brought them before the Advisory Group at the next meeting.

At the point in the process where the Advisory Group had completed work on the standards and was preparing to review the draft rules, I traveled to U.S. Coast Guard Headquarters in Washington, D.C. to brief the senior officials who had been reviewing the materials all along. Following that meeting, Captain Basel indicated that while the Coast Guard could not, as a federal agency, endorse the state standards, they were acceptable and encouraged the state of Washington to continue along the lines we were proceeding because the standards were consistent with the Coast Guard's work within the International Maritime Organization and also consistent with the OPA 90 (also referred to as the "Act") federal legislation for tank vessels. (*See* Minutes of the Advisory Group Meetings, Exhibits 4 to 9 to 1st Norman Aff., and Coast Guard Headquarters Trip Report, Exhibit 11 to 1st Norman Aff.) The letter from Captain Basel is attached to this affidavit as Exhibit 1.

The active participation of the Coast Guard in the BAP rule development process was consistent with the spirit of the Agreement on Oil Pollution Prevention and Response between the Thirteenth Coast Guard District and the state of Washington, which was being negotiated during the same time period and was subsequently signed by Washington Governor Mike Lowry and U.S.C.G. Rear Admiral J.W. Lockwood, Commander, Thirteenth Coast Guard District on April 24, 1995. Under that agreement, the state and the Thirteenth Coast Guard District agreed to "cooperate and to coordinate their efforts in implementing and exercising their respective statutory and regulatory duties related to oil spill prevention and response." Memorandum of Agreement at 2. A copy of the Memorandum of Agreement is attached as Exhibit 2. The

Memorandum of Agreement includes a specific section on Relation to Federal and State law which reads as follows:

> Nothing in this Agreement is intended to, nor shall operate to, preempt Federal or State law. Any actions taken under this Agreement shall be consistent with, and may be limited by, applicable law, regulations and policies.

In a memorandum from the U.S. Coast Guard Commandant Rear Admiral A.E. Henn, Chief, Office of Marine Safety, Security and Environmental Protection dated May 19, 1993, Admiral Henn recognized that OPA did not preempt states' rights. *See* Exhibit 3. He stated that the Coast Guard and the states must be committed to work together to "complement rather than duplicate" oil spill prevention requirements. The involvement of the Coast Guard in the BAP development process was an effort to do just that.

II. *Waivers to Compliance With BAP Rules*

Intertanko's Memorandum In Support Of Motion For Summary Judgment indicates a misconception regarding the waiver provision of the BAP rules. *See* WAC 317-21-520. The waiver provision in the rules is intentionally very broad and waivers are liberally granted. Some examples of waiver requests and the OMS response are attached as Exhibits 4 and 5.

One of the situations where a waiver is frequently requested and granted is when compliance with the BAP standards, in particularly the drug and alcohol use reporting requirement, may conflict with other local, state, or federal laws governing the crew on a vessel coming to Washington waters. In that case, the existing law is used as a basis for granting a waiver for compliance with that provision of the best achievable protection standards.

Another provision that is not clearly understood by some, including Intertanko, is that the statute (ch. 88.46 RCW) specifically prohibits the Office of Marine Safety (OMS) from enforcing rules that would cause noncompliance with an existing collective bargaining agreement. Again, this issue is frequently cited in the plans in the section on drug and alcohol testing. Some collective bargaining agreements in existence address the issue of drug and alcohol testing and that portion of the BAPs that are in conflict with the Agreement, if any, are waived by OMS. An example of this issue was brought to our attention by SeaRiver Maritime and The Exxon Seamen's Union. The intent of the company was to test all employees. The collective bargaining agreement contains a provision for drug and alcohol testing of the stewards department (the cooks). Testing is excluded by the collective bargaining agreement except in certain circumstances. In order to allow SeaRiver to adhere to its collective bargaining agreement with the Exxon Seamen's Union, a waiver will be granted for that portion of their plan. OMS will ask SeaRiver to do everything in their power to include drug and alcohol testing of the stewards department as required in the regulations the next time the collective bargaining agreement is negotiated. If they are unable to do so, OMS will continue to waive the requirement.

III. *Washington Regulation Outside the Three-Mile Limit*

Section IV(D) of Intertanko's Memorandum in Support of Motion for Summary Judgment indicates a misunderstanding of Washington's intent concerning some of the best achievable protection standards that appear to apply outside of Washington's three-mile limit of state waters. WAC 317-21-130 requires owners and operators of tank vessels which come into Washington waters to report events anywhere in the world in a summary form. This provision is not used and may

not be used to enforce or take action against a tank vessel owner or operator for an event that did not occur in Washington waters. Rather, this provision is intended to collect information on events in order to measure the effectiveness of prevention measures implemented by the company to protect Washington's waters from a potentially disastrous oil spill.

This provision is also consistent with the current efforts in the International Maritime Organization (IMO) to create a worldwide database of inspections and casualties that would be accessible to all government agencies. The database will take some time to develop. In the meantime, in order to measure the effectiveness of prevention programs, OMS, with the concurrence of its Advisory Group, requests a summary of events that occur on covered tank vessels anywhere in the world. However, OMS has jurisdiction to act only on those events that occur on Washington waters. There was never any intent to use event information to regulate vessels outside of Washington waters.

WAC 317-21-200(2) requires creation of a standardized bridge resource management system for all vessels in a company's fleet. Since these rules only apply to the fleet of vessels covered by the plan, which are those vessels that may operate in Washington waters, the "fleet" in this case refers only to those vessels that will operate in Washington waters. *See* Exhibit 6. The provision for a consistent bridge resource management system within a fleet was inserted at the recommendation of vessel managers on the Advisory Group who frequently moved crews between vessels. The intent is to have a universal system for a fleet of vessels to allow owners and operators the flexibility to move trained personnel between vessels without having to retrain them in the three

primary functions, navigation, collision avoidance, and administration, for each vessel on which they embark.

WAC 317-21-230 requires implementation of crew training and drill programs. The provision does not require that the training and drills be done outside Washington waters. In order to have flexibility to use the training programs and resources traditionally available to companies, a company can choose to conduct some of the training and/or drills outside Washington waters. There is certainly no prohibition on accomplishing the training and drills outside Washington waters if a company so chooses. However, all the training and drills can be accomplished within Washington.

WAC 317-21-240 and 317-21-255 are record keeping requirements which allow a company to administer their programs outside Washington waters, but do not mandate it. The records may be carried on the vessel or kept at another location. It is at the option of the company. The Advisory Group believed that companies should be able to choose to maintain records at their company headquarters for convenience and for reference. The important thing was that these documents could be made available to OMS within 72 hours. Consideration was given to factors such as weekends, overseas delivery, faxes, and the like. The intent was to allow the owner-operator of tank vessels flexibility to work within its existing system and locations to maintain as few new or duplicate records as possible and to simplify the process of compliance with the best achievable protection standards. There was no intent on the part of OMS or the state of Washington to regulate outside Washington waters.

Finally, WAC 317-21-260 requires potential revision to tank vessel owner and operations management program. Again, management programs involve the company and the vessel. The intent is to regulate the management of the vessel

while it is in Washington waters. If a company chooses to obtain certification and only apply that certification in Washington waters, that is entirely up to the company. The regulations were written to provide flexibility to the owners and operators, not in an attempt to regulate outside Washington.

IV. *Clarification of Pilotage Requirements*

In response to Intertanko's Memorandum In Support Of Motion For Summary Judgment, Sections IV.B.3.d., OMS states that BAP regulations do not conflict with federal pilotage requirements in any way. All Washington state pilots are also federal pilots. Federal pilotage in the state of Washington is provided by state pilots. All vessels in the international trade are required to take on state/federal pilots upon arrival at the Columbia River mouth or as Port Angeles in the Strait of Juan de Fuca. In fact, the U.S. Coast Guard requires mandatory pilotage in Puget Sound. If the state does not establish a mandatory system, the federal government will intervene and make pilotage mandatory.

With regard to the coast-wide traffic, most tankers in the coastal trade are those coming to Washington from Valdez, Alaska. While many of these ships carry masters and mates with federal pilotage endorsements for the Puget Sound area, as a matter of policy nearly all the U.S. flag tankers on the Valdez, Alaska to Puget Sound route still take state-licensed pilots for safety reasons when they sail through Puget Sound. Foreign tankers do not have that option. The crews on foreign tankers do not have U.S. Coast Guard federal pilotage endorsements for Puget Sound. Vessels in the international trade are required to take state/federal pilots. A copy of chapter 88.16 RCW, the Pilotage Act for Washington State, and chapter 296-116 WAC are attached as Exhibits 7 and 8.

V. *Cost of Compliance with BAP Standards*

This part is in response to the affidavit of Miles Kulukundis, of London and Overseas Freighters, and the Declaration of Richard Du Moulin of Marine Transport Lines (MTL), Inc. In paragraph 11 of Mr. Kulukundis' affidavit, he states that London Overseas has spent approximately $12,000 to develop, file, and maintain a best achievable protection plan under ch. 317-21 WAC, and that as requirements are phased in, the expenses for compliance are ongoing and will be substantial. It is important that we put these costs into perspective.

The cost to provide escort vessels for one tanker-one transit, in Washington, more than exceeds the $12,000 which London and Overseas Freighters spent to develop their entire prevention plan. In addition, the pilotage fees for the same tanker, if it were over 50,000 gross tons, would be approximately $10,000 or $5,000 each way. If the tanker were under 50,000 gross tons, the pilotage fees would amount to approximately $5,000--about $2,500 each way.

Mr. Kulukundis' statement is true that the expenses for compliance will be phased in. However, most of the BAP standards will be reflected in international regulation by 1998 and the company will have to spend this money to be in compliance with international and federal regulations by that time. Washington hopes that all the BAP standards will eventually be incorporated into international law and therefore the only expense incurred would be to produce and submit a prevention plan to demonstrate compliance.

It should be noted that the U.S. Coast Guard has no mechanism like prevention plans for evaluating compliance of foreign flag vessels with management practices and personnel policies. The evaluation of a vessel's management and

personnel policies is very difficult in the course of a traditional vessel inspection. The combination used by Washington of a prevention plan submitted by management and an inspection of the vessel to ensure compliance with that plan is much more effective in evaluating management practices, personnel policies and some operating procedures. Hence, the small amount of money required to develop and submit a prevention plan is a great investment when compared to the overall effectiveness of evaluating a company's policies, procedures and practices with respect to prevention.

Mr. Du Moulin states in his declaration that MTL has spent a substantial sum to develop, file, and maintain the chapter 317-21 WAC plan, and that expenses to comply will increase. He then cites an example of the cost of installing one emergency towing arrangement on an MTL tanker at $50,000 for the equipment, plus $30,000 for installation. What he neglects to mention is that this equipment must be installed to be in compliance with the emergency towing requirements in the Safety of Life at Sea Convention. The costs to install this equipment are not solely attributable to the state of Washington, but to the overall implementation of preventative measures at the international, federal, and state level. In fact, by installing the emergency towing equipment in 1996 that will become required in 1998, MTL may well save money considering the rate of inflation of shipyard work over the next two years.

In summary, the cost to develop a prevention plan demonstrating compliance with best achievable protection standards is very modest when compared to the operating cost of a tanker, and in fact is less than the cost to escort one tanker through Puget Sound. In addition, companies will be required to make changes to their operating procedures, management practices, personnel policies, and technology by

1998 in order to come into compliance with the International Safety Management Code and the 1995 Amendments to the Standards of Training Certification and Watchkeeping Convention which will become effective in 1997. The state has imposed very few additional costs that will not be required by the international regime within the next two years.

/s/ Stanley J. Norman
STANLEY J. NORMAN

Signed or attested before me, *Beverly J. Jolley*, by *Stanley J. Norman*.

DATED this 2nd day of July, 1996.

/s/ Beverly J. Jolley
NOTARY PUBLIC, in and for the State of Washington.
My commission expires on: 12/21/97.

EXHIBIT 1

U.S. Department of Transportation

United States Coast Guard

Commandant
U.S. Coast Guard

July 7, 1994

Mr. Stan Norman
Marine Transportation Safety Specialist
Office of Marine Safety
P.O. Box 42407
Olympia, WA 98504-2407

Dear Mr. Norman:

I would like to take this opportunity to pass along my appreciation for your recent presentation in Washington, DC on the Washington State Office of Marine Safety and your proposed "Best Achievable Protection" standards. The U.S. Coast Guard has been and remains committed to protecting all coastal resources in a manner that is responsible to the interests of both the States' and our international obligations. Through shared exchanges such as this, we can both further create solutions to our mutual goals and prevent potential barriers and duplicative requirements.

Again, many thanks for your excellent presentation. I look forward to continuing cooperative efforts not only with the staff in Headquarters, but mots importantly, also with Admiral John Lockwood's staff in the Thirteenth Coast Guard District in Seattle.

Sincerely,

/s/ B.G. Basel

B.G. BASEL
Captain, U.S. Coast Guard
By direction of the Commandant

EXHIBIT 2

MEMORANDUM OF AGREEMENT
ON
OIL POLLUTION PREVENTION AND RESPONSE
BETWEEN
THE THIRTEENTH COAST GUARD DISTRICT
AND
THE STATE OF WASHINGTON

WHEREAS, the United States Coast Guard and the State of Washington share a common interest and responsibility for protecting the waters of Washington and have determined that cooperation in prevention and response to oil spills has permitted the State and the Coast Guard to leverage available resources which in turn has led to better protection of the environment; and

WHEREAS, the United States Coast Guard and the State of Washington find efficiency in government is important to the public they serve and that entering into a Memorandum of Agreement (MOA) that builds upon present close working relationships and identifies areas for expanded interaction will lead to increased protection for the waters of Washington; and

WHEREAS, Congress enacted the Oil Pollution Act of 1990 (OPA 90) and other Federal laws to protect the waters of the United States from oil pollution and to plan for effective and immediate response in the event of an oil spill, and the President subsequently designated the Coast Guard as the Federal On Scene Coordinator (FOSC) within the Washington coastal zone; and

WHEREAS, the State of Washington (hereinafter "the State") has enacted The Oil and Hazardous Substance Spill Prevention and Response Act of 1991 and other State laws to

protect the waters of the State from oil pollution and to plan for effective and immediate response in the event of an oil spill and to augment the State's statutory authority for the prevention and response to spills in waters of the State; and

WHEREAS, both the Thirteenth Coast Guard District (hereinafter "the Coast Guard" except where the context indicates otherwise) and the State recognize the critical roles each has to perform in preventing oil spills, in planning for and responding to oil spills, and in enforcing their respective environmental laws within the waters of the State; and

WHEREAS, the Parties recognize that coordination and cooperation between them in the implementation and exercise of their respective statutory and regulatory authority is essential to avoid conflict and unnecessary duplication and provide the maximum protection to the environment through both prevention and response activities; and

WHEREAS, the Parties desire to act in a cooperative and coordinated manner to protect the waters of the State from actual or threatened oil pollution and to prepare for an effective and immediate response in the event of an oil spill; and

WHEREAS, oil spills require a rapid, efficient, and coordinated response and cleanup from Federal, State, and local agencies, as well as from responsible parties and private entities to minimize the effects on human, wildlife, and other natural resources; and

WHEREAS, the Commander, Thirteenth Coast Guard District, is the senior Coast Guard officer in an area that includes the State, exercising Federal authority under the Oil Pollution Act of 1990, and other Federal laws with respect to oil pollution prevention and response within State waters; and

WHEREAS, the Governor of the State of Washington is the senior State official exercising authority over those State agencies which have responsibilities under State law for oil pollution prevention and response within State waters as described in Appendix A of this Agreement; and

NOW THEREFORE, the Parties agree, to the extent permitted by law, policy and available resources, to cooperate and to coordinate their efforts in implementing and exercising their respective statutory and regulatory duties related to oil spill prevention and response.

I

PARTIES

The Parties to this Agreement are the Thirteenth Coast Guard District and the States of Washington.

II

PURPOSE OF THE AGREEMENT

A. The purpose of this Memorandum of Agreement (MOA) is to ensure that the Parties exercise their respective authorities regarding oil spill prevention and response in a cooperative and coordinated manner so as to avoid unnecessary duplication and conflict and to ensure the best achievable protection from the impact of pollution incidents within the waters subject to the jurisdiction of the United States which are within or may impact the waters of the State of Washington.

B. The Parties recognize that differences of opinion may exist and arise from time to time as to the extent to which Federal law may preempt the State from enacting regulations involving the transport of oil in State waters. However, it is not the intent of this Agreement to settle, or address in any

manner, the legal or jurisdictional differences which may arise between the Parties. It is the intent of the Parties to reserve such issues for resolution outside this Agreement. Of greater importance is the clear agreement by the Parties that the protection of State waters is of the highest priority and the recognition that they musPt act in a cooperative and coordinated manner if effective prevention and response efforts are to occur. To that end, this Agreement is intended to provide a means by which the Parties establish an ongoing, working-level prevention and response relationship.

III

DEFINITIONS

A. Except where otherwise specifically defined in the context of its use herein or where specifically set forth below, terms used in this Agreement shall have the meaning as set forth in applicable Federal and State law.

B. The term "State waters" (or "waters of the State") shall mean those navigable waters of the United States which lie within the jurisdiction of the State of Washington and over which the Coast Guard has concurrent Federal authority for oil spill prevention and response.

C. The term "vessel(s)" when used in this Agreement shall mean all tank vessels and tank barges and all commercial vessel(s) of 300 gross tons or more, including both United States and foreign flag. This definition is not intended to limit actions of the Parties under this Agreement relative to smaller vessels where such actions are clearly appropriate or required under applicable statute to ensure the protection of the waters of the State from pollution.

IV

INFORMATION SHARING

The exchange of information between the parties relative to pollution events and risks is necessary to develop appropriate prevention and response systems. Both Parties maintain information systems that are relevant to both historical and real-time incidents. The Parties will seek to encourage the fullest degree of information sharing from available and pertinent data bases in order to make accurate and timely decisions to prevent and/or respond to oil pollution. Transmissions of information shall be in accordance with procedures adopted by the Parties for that purpose.

A. Action:

1. The Parties agree, subject to limitations imposed by applicable law and regulation, to share information from relevant studies.

2. The Parties will advise each other as soon as possible of information they receive of the following events occurring in the navigable waters, or that may impact the State, involving vessels: disablings, collisions, groundings, explosions, rammings, allisions, distressed vessels and other events which may significantly increase the potential for an unauthorized discharge or create an unusual or acceptable risk to public health and safety, or the safety of navigation within State waters.

3. The Parties will inform each other as soon as possible of any situation or circumstance relative to facilities whose operation or equipment may significantly increase the potential for an unauthorized discharge or create an unusual or unacceptable risk to public health and safety, or the safety of navigation within State waters.

4. The Parties agree to identify and share existing data bases and work toward developing risk management programs that provide risk data sharing for vessels and access by both parties to all data, subject to the requirements of applicable law, regulations, and policy, in a manner to conserve and leverage agency resources.

V

OIL SPILL RESPONSE PREPAREDNESS

A. Planning Documents

1. National Oil and Hazardous Substances Pollution Contingency Plan ("National Contingency Plan – NCP"):

a. The National Contingency Plan establishes the response organization within the United States and requires tiered contingency planning efforts. The Environmental Protection Agency (EPA) is the lead agency in drafting the NCP. The Coast Guard and EPA are jointly responsible for implementing the NCP. The NCP governs actions concerning spill response and cleanup for Federal, State, and local agencies, responsible parties, cleanup contractors, and others participating in such actions in United States waters.

b. The State will work with the Coast Guard to ensure State plans and policies are consistent with the NCP.

2. International Coordination

Subject to the restrictions of applicable law, regulation and policy, the Coast Guard agrees to provide information to the State concerning agreements, plans and operating procedures developed to coordinate pollution prevention and response efforts with Canada.

3. Statewide Master Oil and Hazardous Substance Spill Prevention and Contingency Plan

The State has developed and maintains the Statewide Contingency Plan that details State responsibilities, policies, and actions governing response to and cleanup of spills in waters of the State.

4. Northwest Area Contingency Plan

a. The Area Committees established under OPA 90 are responsible for the development of Area Contingency Plans which describe how Federal, State, and local agencies, as well as owners and operators, cooperatively respond to oil spills. The Area Committee also coordinates the scheduling of oil spill exercises in the Pacific Northwest. The Coast Guard Predesignated Federal On-Scene Coordinators (FOSC) are the chairs of the Coastal Area Committees in their respective areas of responsibilities. The State is the vice chair of the Coastal Area Committee. The Area Committees have created a single "Northwest Area Contingency Plan" which serves as the Area Plan for each of the areas in the State (coastal and inland).

b. The State has merged the State Contingency Plan with the Northwest Area Contingency Plan to coordinate ongoing planning efforts and create consistency between the local, State, and National Contingency Plans. In essence, there is "one" plan in the event of an oil spill within the State of Washington.

c. Geographic Response Plans are specific operational plans which identify and describe specific priorities and methods to protect specific regional environmental areas. These plans are prepared jointly by the Coast Guard and the State with the input of other resource agencies, response contractors, citizen groups, Indian tribes, and oil industry representatives. They are included as appendices to the Area Contingency Plan (and therefore the

State Contingency Plan), and may be referenced as part of facility and vessel contingency plans.

5. Vessel Prevention Plans

a. The State requires tank vessels and tank barges operating in State waters to file an oil spill prevention plan that provides the best achievable protection for the waters of the State.

b. Both Parties agree to work together and advise each other of any aspects of implementing their respective oil spill prevention plan programs which might impact on the other Party's oil spill prevention programs.

6. Vessel Response Plans

a. The State requires tank vessels and certain cargo and passenger vessels operating in State waters to file a contingency plan that demonstrates that the vessel will provide, to the maximum extent practicable, the highest protection from damages caused by the discharge of oil into the waters of the State and for the containment and cleanup of oil spills from the vessel into the waters of the State.

b. At the National level the Cost Guard is responsible for developing Federal standards for reviewing and approving tank vessel oil spill response plans required by Federal law. Such plans are reviewed and approved at Coast Guard Headquarters in Washington, D.C.

7. Facility Prevention Plans

a. The State requires facilities to have an oil spill prevention plan that demonstrates that the facility will provide the best achievable protection from damages caused by the discharge of oil into the waters of the State.

b. Both Parties agree to work together and advise each other of any aspects of implementing their respective facility oil spill prevention plan programs which might impact on the other Party's prevention and response programs.

8. Facility Response Plans

a. The State requires facilities to file a contingency plan that will demonstrate that the facility will provide, to the maximum extent practicable, the best achievable protection from damages caused by the discharge of oil into the waters of the State and for the containment and cleanup of oil spills from the facility into the waters of the State.

b. The Coast Guard is responsible for developing standards for reviewing and approving facility oil spill response plans as provided by Federal law.

c. Recognizing the limitations expressed in Paragraph X, the Parties agree to cooperate to the maximum extent possible in the development of requirements for facility response plans with the long-term objective of providing facilities with a single plan review and approval process. In the interim, the Parties will cooperate to ensure plan requirements are compatible and do not conflict. Either Party may, at its option, accept the review of the facility response plans by the other Party (subject to periodic oversight) where procedures to account for any differences between the State and Federal requirements have been mutually agreed upon.

9. Regional Marine Safety Plans

a. Regional Marine Safety Plans developed by Regional Marine Safety Committees appointed by the State contain recommendations for improvements to safe marine transportation in regional waters of Washington State.

b. The State seeks implementation of the plans through State and Federal actions. The Coast Guard agrees to consider plan recommendations in developing Federal programs.

B. Government Committees

1. *States/BC Oil Spill Task Force.* The State is a member of the States/BC Oil Spill Task Force. The Coast Guard, while not a member of the Task Force, attends meetings, engages in information exchange and provides input as appropriate.

2. *Regional Response Team.* The National Contingency Plan (NCP) directs the organization of government committees to prevent and respond to pollution emergencies. The Region X Regional Response Team (RRT) is established as a coordinating committee by the NCP and includes the State, along with the Federal agencies with pollution response responsibilities. The Parties agree to jointly participate as members of the RRT in regularly scheduled meetings, assisting the Federal and State OSCs during spill events, and coordinating with the Area Committees in contingency planning efforts.

3. *Joint Response Team.* The Canada-United States Joint Marine Pollution Contingency Plan (CANUS Plan) establishes the Joint Response Team (JRT) to function as an advisory team activated in the event of a spill covered by the CANUS Plan. The membership of the JRT is essentially the same as the RRT with Canadian equivalents added. The Parties agree to support the JRT in the same way they support the RRT. Activation of the JRT will not affect the State's role in managing the response under a unified command.

4. *Washington State Natural Resource Damage Assessment Team (NRDA).* This team consists of state and

Federal resource agents and Tribes. The Team provides unified and coordinated natural resource recommendations to the unified command, coordinates natural resource damage assessments, and has the lead in determining natural resource protection strategies.

5. The Parties agree to coordinate local response planning by jointly participating in the Area Committee planning process. Both Parties are strongly committed to participating in Northwest Area Contingency Plan development and the use of the Northwest Area Committee to coordinate exercises and drills, consistent with the provisions of the NCP.

VI

PREVENTION OF OIL SPILLS

A. The Parties agree to cooperate in the execution of their respective regulatory prevention responsibilities, to minimize duplication of effort, and seek to identify opportunities for innovative implementation of casualty prevention programs, wherever possible.

B. Vessel Inspections and Examinations

1. The Parties conduct inspections and examinations to improve pollution prevention and to enforce their respective laws aboard United States and foreign flag vessels operating in State waters. Subject to the recognition that each Party must independently exercise its respective responsibilities in accordance with applicable law, regulations, and policies, the Parties agree to: (a) work together to avoid inconsistent requirements and to coordinate vessel inspections and examinations in such a way that disruption to the industry is minimized and efficiency and pollution prevention maximized; and (b) to make inspection/examination information available

to the other and to cooperatively review inspection/examination results.

2. In administering vessel inspection/examination programs:

a. The Parties will coordinate the scheduling of vessel boardings to the maximum extent practicable. This Agreement does not preclude either Party from scheduling independent boardings as required by their respective policies.

b. The Parties agree to promptly inform each other of violations or potential violations of Federal and State law that could result in a marine casualty or lead to a pollution incident.

c. The Parties agree to promptly inform each other of any situation or circumstance they may discover relative to a vessel's condition, equipment or crew that may increase the potential for an unauthorized discharge or create an unusual or an unacceptable risk to the public health and safety, or the safety of navigation within State waters.

C. Identification of High Priority Vessels

The Parties have authority (under their respective Federal and State laws) to regulate the entry of vessels, including those determined to be a threat to the environment. Both Parties have developed criteria aimed at identifying high priority vessels for boarding. Both Parties agree to share information on such vessel boardings to the maximum extent practicable, and when either Party determines that a vessel or vessels pose such a threat to the environment, that determination will be forwarded to the other Party. The Parties will consider available information in taking action as appropriate under applicable law.

D. Tank Vessel Manning

1. The Parties agree to cooperate and coordinate in evaluating manning, training, and qualification requirements.

2. The Parties agree to share the progress and results of their research into human factors that cause marine casualties. The Parties agree to actively promote and coordinate research projects to identify those human factors that cause pollution incidents.

E. Vessel Transfer Operations

1. Recognizing that bunkering and refueling operations account for the most chronic vessel oil pollution in State waters, the Parties agree that they will cooperatively monitor transfer operations aboard vessels and advise the other Party of violations observed, make transfer monitor records jointly available and cooperatively review monitoring results.

2. The Parties agree to consider and share other available information to initiate improved strategies aimed at supplementing those presently employed to reduce the risk of these spills.

F. Waterways Management

1. Vessel Traffic Systems

a. The United States Coast Guard under the Ports and Waterways Safety Act is authorized to construct, operate, maintain, improve or expand Vessel Traffic Services (VTS) within ports to increase navigational safety and protect the marine environment, by reducing the risk of collision or grounding.

b. Subject to applicable Federal law, regulations and policies, the Parties agree to share information relevant to vessel traffic management issues and to work closely with

each other in determining the best way to manage vessel traffic in State waters.

2. Aids to Navigation

Federal law authorizes the Coast Guard to establish, regulate, and maintain a uniform system of aids to navigation throughout the United States. The State agrees to assist the Coast Guard in identifying recommended changes or improvements, to the system of navigational aids within the water of the State.

G. Facility Inspections

1. Both Parties regulate and inspect oil transfer facilities and their operation within the State to ensure compliance with pollution prevention and pollution response regulations. To improve safety and conserve resources, the Parties agree:

a. To coordinate their respective inspection and monitoring activities to the extent practicable to utilize the resources of both Parties efficiently and effectively, and to minimize the disruption of the facility inspected; and

b. To coordinate in the enforcement of requirements for trained and qualified personnel to be responsible for transfer operations at waterfront facilities; and

c. To work together to encourage the development of adequate facilities to receive oily wastes from vessels.

H. Public Information and Education

1. The Parties agree that public education in areas of pollution prevention and safety is a high priority and each Party should seek to maximize opportunities to coordinate oil pollution prevention, public awareness, and education programs.

2. The Parties agree to cooperate in the development and implementation of public information and education for all areas in which the Parties share statutory responsibilities.

VII

RESPONSE

A. Unified Command

1. Response to marine oil spills in the State will be managed by the Parties using the Incident Command System (ICS) as defined in the Area Plan through which decisions will be made by consensus, whenever possible. The Parties agree to establish and staff a joint command post to expedite consensus decision-making. As provided in Federal law and subsequent delegations, the FOSC is required to direct all Federal, State and private actions in response to spills or threats of spills which are a substantial threat to the public health or welfare. Should a disagreement occur over an issue which is not specifically delegated to the State by Federal law, the Coast Guard OSC shall have final decision-making authority after advising the State OSC of that decision.

2. The Parties agree to use the Unified Command for all relevant decisions during oil spills.

3. Participation in the Unified Command does not mean that the Parties are relinquishing or surrendering their authority, including the right of the State to establish more stringent cleanup criteria under State law.

4. The Coast Guard OSC (FOSC) will coordinate with the State OSC through the Unified Command on all significant issues affecting the management of the spill from the control of oil loss during the initial stages of the incident through the final Federally directed cleanup.

B. Notification

Both Parties agree to provide to each other the earliest possible notification of discharges of oil and imminent threats of such discharge as provided in the applicable Area Plan.

C. Environmental Protection

1. Both Parties recognize the importance of protecting and preserving natural resources in responding to an oil spill event. Response strategies and procedures established by the ICS Planning Division, including the NRDA Team, and the Geographic Response Plans will be used by the OSCs in the Unified Command as the primary guidance in making resource protection decisions.

2. The Coast Guard agrees to involve the State in vessel salvage, lightering, safe haven and related decision-making to the extent such decisions may affect the release of spilled oil, its containment or its cleanup. The FOSC retains final authority for such decisions.

3. The Coast Guard agrees to recognize the agency designated by the State as the State designated lead in coordination with the appropriate Federal agencies to organize and manage wildlife rescue and rehabilitation, and wildlife volunteer management efforts, through the Unified Command.

D. Joint Information Center

The Parties agree to establish within the Unified Command a Joint Information Center (JIC) to provide for the coordinated dissemination of information. This does not preclude the Parties from making independent responses to the media and public.

E. Drills and Exercises

1. Drills and exercises are required by both Parties to ensure the readiness and coordination of pollution response organizations. It is the intention of the Parties to encourage coordination and participation in the periodic drills and exercises to facilitate a better understanding of each party's duties and responsibilities as well as to ensure a coordinated, effective working relationship at oil spill incidents. The parties agree to jointly evaluate drills and exercises and recommend or require changes to plans, equipment or organizations as appropriate.

2. The Parties agree to coordinate the planning, design, conduct, and evaluation of exercises to the extent possible under applicable laws, regulations, and policies. The Parties agree to use Northwest Area Committee work groups for large drill scheduling purposes.

F. Response Monitoring and Technology

1. The Parties agree that methods used to clean up oil and oily debris shall whenever possible be established through the Unified Command in order to decide the level of action required by the responsible party, and may decide to either direct cleanup operations through the responsible party or to assume responsibility for the cleanup operation.

2. The Parties agree, through the Unified Command, to provide timely input and recommendations on dispersant usage, in situ burning, bioremediation, other non-mechanical response technologies and the discontinuance of cleanup operations and demobilization of response activities. The State retains the authority to undertake remedial or mitigating actions beyond the response actions required by the National Contingency Plan.

G. Tank Vessel Response Equipment Standards

Coast Guard Headquarters has established tank vessel response equipment requirements and is responsible for maintaining and updating those requirements. The State is authorized by State law to adopt rules including standards for spill response equipment to be maintained on tank vessels operating State waters.

VIII

NATIONAL POLLUTION FUND CENTER INFORMATION

A. The Oil Spill Liability Trust Fund (The Fund):

The Fund provides Federal funding under certain conditions for oil discharge removal actions. The Fund is available in certain circumstances to compensate the State for incurred costs and damages associated with oil discharges. To the extent allowed, a state may access The Fund under currently published regulations and National Pollution Fund Center (NPFC) procedures.

B. The National Pollution Fund Center (NPFC):

1. The National Pollution Fund Center (NPFC) administers the Oil Spill Liability Trust Fund (The Fund) in order to: provide State access to The Fund, conduct cost recovery, accept and process claims, and evaluate requests by Federal trustees to fund initiation of the assessment of natural resource damages. The NPFC also administers Certificates of Financial Responsibility and provides CERCLA/Superfund funding to Coast Guard On Scene Coordinators (FOSC) responding to hazardous substances incidents.

2. The State may receive payment from The Fund in the State's role as a response organization engaged in removal

activities consistent with the National Contingency Plan, as appropriate claimant for damages, and in the State's role as a natural resource trustee.

a. Action:

(i) The State may negotiate directly with the NPFC to establish a cooperative agreement to provide access to The fund under Section 1012(d)(2) of the Oil Pollution Act of 1990 (OPA 90). Any agreement between the State of Washington and the National Pollution Fund Center shall be attached as an annex to this MOA.

(ii) The NPFC, upon request of the Governor of Washington and as authorized by the Federal On Scene Coordinator (FOSC), may obligate The Fund for payment in an amount not to exceed $250,000 for removal costs, consistent with the National Contingency Plan (NCP), required for the immediate removal of a discharge, or the mitigation or prevention of a substantial threat of a discharge of oil. The NPFC's Technical Operating Procedures (TOPS) for State access under Section 1012(d)(1) of OPA 90, and the TOPS for resource documentation under OPA 90 are approved guidelines for State use to access The Fund under this section.

(iii) Claims. The Fund may be used for the payment of State claims for uncompensated removal costs determined by the Coast Guard pursuant to the procedures found in 33 CFR Part 136.

(iv) When the State works directly in support of the Federal On Scene Coordinator (FOSC) in performing removal actions, a Pollution Removal Funding authorization (PRFA) may be provided to the State to establish a contractual relationship and to obligate The Fund.

(v) Natural Resource Damage Assessments. The State's designated Natural Resource Trustee may request access to The Fund for the initiation of an assessment of natural resource damages resulting from a discharge of oil, through a Federal Lead Administrative Trustee in accordance with the procedures established by the NPFC (Section 6002(b) of OPA 90).

IX

ENFORCEMENT

A. Although enforcement action undertaken by each Party must occur independently, the Parties agree to consult with each other as to intended enforcement action relating to pollution cases or incidents which have the potential to cause pollution.

B. Subject to the requirements and limitations of applicable laws, regulations and policies, the Parties agree to coordinate investigations and enforcement actions involving oil spills or marine casualties which have the potential to cause oil spills, including the sharing of pertinent information regarding witnesses, reports, and other available information that may assist in determining the cause of the oil spill or casualty.

C. When the Parties become aware of apparent violations of the other party's laws and regulations, they agree to notify the other Party.

X

RULE-MAKING

A. The Oil Pollution Act of 1990 and other Federal laws provide for the issuance of regulations pertaining to the prevention of oil spills from vessels. The Commandant of the Coast Guard has the authority to promulgate such regulations.

The Commander, Thirteenth Coast Guard District and the respective Captains of the Port, have limited authority to promulgate local regulations.

B. Acting under its statutory and regulatory authority, the State has the authority to promulgate regulations concerning oil spill prevention and response that are not preempted by Federal law. The Parties agree to maintain close communication to reduce conflict between each Party's regulations.

C. The intent of this section is to avoid conflict and inconsistent regulation in rule-making wherever possible and to endeavor to provide a coordinated response to oil pollution prevention and response. Recognizing that both Parties must follow strict procedures with respect to public notice and comment in rule-making, the Parties agree that, in the process of issuing rules regarding the prevention of and response to oil spills, they will consider the existence of the other Party's existing rules on the subject.

XI

RELATION TO FEDERAL AND STATE LAW

Nothing in this Agreement is intended to, nor shall operate to, preempt Federal or State law. Any actions taken under this Agreement shall be consistent with, and may be limited by, applicable law, regulations and policies.

XII

MISCELLANEOUS

A. This Agreement represents a voluntary understanding between the Thirteenth Coast Guard District and the State of Washington.

B. The terms of this Agreement may be changed at any time by the Parties by a written, signed amendment hereto with or without notice to any other person.

C. The Agreement may be terminated by written notice of either Party at any time without notice to any person other than the other Party.

D. No action based upon this Agreement may be brought against the United States or the State of Washington by any person, or by either Party against the other Party.

E. This Agreement does not alter, modify, abridge, create, or in any way affect any rights, duties, obligations, or liabilities of either Party or any person under the laws of the United States or the State of Washington.

F. The actions called for under this Agreement will be carried out by the Parties as their available resources allow. If either Party is unable to execute any actions called for in this Agreement due to a lack of resources, such inability to act shall not be considered a reasonable effort to overcome the resource shortage.

G. Nothing in this Agreement is intended to delegate the enforcement authorities of either Party to the other. However, it is the common goal of the Parties that through the cooperation described in this Agreement, each Party may conserve resources by using information gathered by the other Party in their respective investigations and enforcement actions subject to applicable laws, regulations and policies.

H. In the event that individual and severable portions of this Agreement are found to be in conflict with either State or Federal law, regulations or policies and therefore of no effect, the Agreement will remain in effect without those provisions

unless either Party notifies the other in writing that the entire Agreement is terminated.

I. Any action to modify, amend, or terminate this Agreement may only be taken by the Governor of the State of Washington or the Commander, Thirteenth Coast Guard District or persons to whom this authority is specifically delegated by them.

J. Provisions of this MOA shall be effective when signed by both parties. This MOA will remain in effect until revised or rescinded by either party by written notice.

FOR THE STATE OF WASHINGTON:	FOR THE UNITED STATES COAST GUARD:
/s/ Mike Lowry MIKE LOWRY, Governor State of Washington	/s/ J.W. Lockwood J. W. LOCKWOOD, Rear Admiral, USCG Commander, Thirteenth Coast Guard District
Date: 24 April 1995	Date: 24 April 1995

APPENDIX A

The following agencies of the State of Washington have responsibilities under State law relating to oil spill prevention and response as described:

Department of Community Development is responsible for the development and implementation of the State's Comprehensive Emergency Management Plan, management of the State's 24-hour emergency notification system and, in the event of an oil spill, will activate of the State's Emergency Operations Center and coordinate recovery efforts on behalf of affected local governments, businesses, and individuals in the State.

Department of Ecology is the designated trustee for natural resources under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the Oil Pollution Act of 1990 and State law, and is responsible for planning for the prevention of, and response to, facility oil spills, for inspecting facilities to assure compliance with State oil spill prevention and contingency planning requirements, for preparation of the Statewide Master Oil and Hazardous Substance Spill Contingency Plan that establishes the State's framework for response to marine and inland spills, represents all agencies and is the designated State contact for oil spill reports and, acts as the State's On Scene Coordinator (OSC) for responding to all spills of oil and hazardous substances. DOE coordinates the activities of the Washington State Natural Resource Damage Assessment Team. DOE also serves as the vice chair of Coastal Area Committees, represents the State as the State RRT member and is a member of the States/BC Oil Spill Task Force.

Department of Fish and Wildlife is the trustee responsible for the protection and management of the State's fish and wildlife

resources, including the training and managing of volunteers in wildlife planning and rescue efforts and, in the event of an oil spill, will identify sensitive resource areas and habitats, issue Hydraulic Protection Approvals for certain cleanup and restoration activities, rescue and rehabilitate wildlife, identify trust natural resource injuries, and conduct natural resource damage assessment.

Department of Health is responsible for overseeing the safety of the State's shellfish for human consumption.

Department of Natural Resources (an agency responsible to the Commissioner of Public Lands, a constitutionally elected official) is responsible for the management of State-owned aquatic lands and associated habitats and, in the event of an oil spill, will identify trust natural resource injuries, and conduct natural resource damage assessment.

Office of Marine Safety is an oil spill prevention agency and, as such, is responsible for planning for the prevention of vessel oil spills, for implementing regional marine safety plans, for inspecting vessels to assure compliance with State oil spill prevention laws, for establishing standards for and approving vessel oil spill contingency and prevention plans required under State law, and assuring compliance with these plans.

Parks and Recreation Commission is responsible for operating and maintaining State park resources including large upland and marine parks, underwater parks, beaches, boat launches, boat moorages, and, in the event of an oil spill, will conduct natural resource damage assessment.

Natural Resource Damage Assessment Team (NRDA) comprises the Departments of Ecology, Fish and Wildlife, Health, Natural Resources, and the Parks and Recreation Commission and, in the event of an oil spill, will act to give

unified State natural resource recommendations to the State OSC, coordinate natural resource damage assessment, and provide assistance in determining booming and cleanup strategies.

EXHIBIT 3

U.S. Department of Transportation

United States Coast Guard

Commandant
U.S. Coast Guard

May 19, 1993
16455

From: Commandant

To: Commander, Coast Guard District (d)

Subj: COAST GUARD AND STATE MEMORANDUM OF AGREEMENT ON MARINE ENVIRONMENTAL PROTECTION

Ref: (a) COMDT (G-MEP) ltr 16452 dtd 18 Aug 92

1. The Oil Pollution Act of 1990 (OPA 90) specifically affirmed the rights of states to protect their marine environment. In reference (a), the Commandant directed all district commanders to enter into Memoranda of Agreements (MOA) with states to ensure a sound national marine environmental protection policy through joint preparedness, prevention, response, and law enforcement efforts. The MOA should minimize duplicative requirements, leverage resources and eliminate barriers to marine transportation due to differing Federal and state regimes. I will strongly support your creative solutions towards achieving these goals. We must, however, be careful to not appear to be delegating our responsibilities to the states - a cooperative and shared approach must be emphasized.

2. Several states have been extremely pro-active in developing programs that may differ somewhat from our

Coast Guard policies and may exceed our mandates and regulations. OPA 90 dis not preempt states rights, and, in our efforts we must be committed to work together to complement rather than duplicate. Should Federal preemption of a state mandate become necessary, it will become a complex legal issue. For guidance, I have provided a copy of the Chief Counsel's memorandum on the Federal preemption, enclosure (1).

3. I have established a State Liaison Focus Group under the Associate Program Director (G-MI), comprised of members from each marine safety program, enclosure (2), to assist you in developing MOA's with your states. They have developed a concept paper, enclosure (3), and a generic MOA, enclosure (4), to help expedite the process. Attached to the generic MOA is an Annex provided by the National Pollution Funds Center (NPFC) on funding and trustees issues. Should you desire to alter the provided wording, or add additional information into the body of the MOA, please contact the NPFC focus group representative.

4. As the MOA process evolves and states expand their environmental roles, different states can be expected to have varying positions on like issues for a wide variety of reasons. Provides broad guidance on the full range of issues that should provide sufficient direction for negotiation with the states. Please feel free to contact the cognizant program manager, or appropriate focus group representative to discuss specific issues. For any issues which may have broad program impact or may require policy guidance, I request that it be forwarded to the focus group coordinator for program evaluation, decision and dissemination to all districts. Attachment 3 to the concept paper provides a format that we have found helpful for thinking through specific issues.

5. State bills and regulations can often progress at a much more rapid pace than in the federal system. To help you stay on the leading edge of state issues, I have accessed a computerized system which tracks state legal initiatives. This system, "STATENET", can provide current status and summary of the approximately 140,000 states' bills per year based on specific word topic and state searches. Enclosure (5) provides a summary, listing of key topics as an example of the system's output. A state by state synopsis with the appropriate STATENET information will be disseminated to each of you shortly. I welcome your input to expand the list to meet your needs and plan to provide you with direct access to the system in the very near future.

6. I encourage you to press forward smartly and build on the cooperative momentum that has already been placed in motion by many of our state counterparts. We must also continue to ensure that both our Federal and state interests and resources are available to work together for the common purpose of protecting the marine environment.

/s/ A.E. Henn

A.E. HENN
Chief, Office of Marine Safety,
Security and Environmental Protection

Encl: (1) G-LMI Preemption Memo dtd 30 Jan 91
(2) State Liaison Focus Group Members
(3) Concept Paper
(4) Generic MOA
(5) STATENET Summary, Topic List, Sample

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

CAUSE NO. C95-1096

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington; CHRISTINE O. GREGOIRE, Attorney General of the State of Washington; BARBARA J. HERMAN, Administrator of the State of Washington Office of Marine Safety; DAVID MCEACHRAN, Prosecutor of Whatcom County; DAVID NEEDY, Prosecutor of Skagit County; JAMES KRIDER, Prosecutor of Snohomish County; and NORMAN MALENG, Prosecutor of King County,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL; THE NATURAL RESOURCES DEFENSE COUNCIL; and OCEAN ADVOCATES, INC.,
Intervenors.

DECLARATION OF WILLIAM BAFUS

STATE OF WASHINGTON)
) ss.
COUNTY OF THURSTON)

I, William Bafus, being first duly sworn on oath, depose and state as follows:

1. I am an Environmental Planner for the State of Washington Department of Ecology. I have for worked for the department 16.5 years. I have held the position of Environmental Planner for 16.5 years. Within the Economic and Regulatory Research Section, I conduct economic analyses (Small Business Economic Impact, general economic impact, benefit/cost) on agency rule proposals and policy initiatives. I also collect and analyze economic and other related data, as well as provide financial and statistical analysis and forecasts as needed. I also analyze legislation affecting my work unit and the agency.

Jobs outside Department of Ecology include work with the Washington State Pollution Liability Insurance Agency as an economic and financial analyst for 13 months. In 1987, for three years, I also worked at the Washington State Senate, Committee on Ways and Means as a fiscal analyst with responsibility for taxation and revenue analysis. In 1973, for three years, I worked at the Washington State Office of Program Planning and Fiscal Management, State Planning Division doing socio-economic analysis and planning process administration. In 1968, for five years, I worked at the University of Puget Sound as an Assistant Professor of Economics.

2. My educational background is as follows: Willamette University, A.B. in Economics, 1964; Purdue University, M.S. in Economics and completion of non-thesis requirements for PhD, 1968.

3. The charts attached as Exhibits 1 and 2 are derived from data collected during the development of a facility financial responsibility rule as required in Section 704 of Chapter 200, Laws of 1991 (Oil Spill Prevention and

Response Act). The rule development and the Small Business Economic Impact Statement required information about cleanup costs for releases of oil.

4. Information about actual oil spills occurring over the period from approximately mid-1980's through 1993 was gathered from Department of Ecology records, U.S. Coast Guard records, and published sources (U.S. EPA, State of California, etc.) Cleanup cost information was obtained to the extent necessary through telephone and other contacts with involved entities. The data was collected and analyzed in order to develop formulae for facility financial responsibility rule requirements for various classes of oil or oil product-producing and oil-handling facilities. Ecology sought to determine whether the rule had disproportionate impacts on small business.

5. Table A entitled "Actual Cost of An Oil Spill Cleanup by Number of Barrels and Type of Oil" shows data for total cleanup cost, in 1993 dollars. The data set is from the spills and releases in the data set described in paragraph 4. The information for the type of oil is broken into the categories of: all spills (whatever the type of oil, either "heavy" or "light"); for spills involving crude oil or "heavy" petroleum products (heavy bunker fuel, asphalt, etc.); and for spills involving "light" petroleum products (gasoline, diesel, aviation gas, etc.) In each case, the data is separated into the number of barrels spilled. The second column is the number of cases involved in a certain number of barrels spilled. The third and fourth columns show the minimum and maximum total cleanup costs reported for spills in each of the categories are shown. The last column shows the average of the total clean up costs for all the spills within each size category.

6. In Table A, for example, for heavy oil, such as that carried by tankers, a low cost for clean up of 101 to 1000

barrels spilled would be $5,920 and the high cost would be $5,000,000. The average costs to clean up this number of barrels would be $685,777.

7. Table B entitled "Average Cleanup Costs per Barrel of Oil" describes the average costs per barrel to cleanup an oil spill. Table B gives the same information as Table A, except that the cost information is shown on a *per barrel* basis. Table B provides a different perspective on the same information set.

8. In Table B, for example, for heavy oil, such as that carried by tankers, the low cost per barrel of oil to clean up a spill of 101 to 1000 barrels is $30 per barrel. This high cost is $9,130, while the average cost per barrel to clean up such a spill is $1,360.

9. I reviewed the affidavit of C. Jonathan Neel, which discussed five incidents in Washington waters. One of the incidents, *Matzukaze* was a grounding with no spill, and was not considered by me. Four of the incidents resulted in an average size spill of heavy oil products of 185,000 gallons or 4,405 barrels.

10. Using the data cited in Table B included with my declaration, the per-barrel cleanup costs for a spill of this size and type of product under average conditions would be $1,428. Multiplying this value by 4,405 barrels results in an estimated total cleanup cost of approximately $6.3 million in 1993 dollars.

11. I use the term "average conditions" because actual cleanup costs incurred for any of the spills individually or for all of them collectively may differ from average values due to the presence or absence of sensitive or especially valuable environmental resources, weather conditions, tidal conditions, or any number of other environmental factors. The costs

described in paragraph 3 do not include any resource damages or oil spill penalties.

I swear under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

DATED this 3rd day of July, 1996.

/s/ William Bafus
WILLIAM BAFUS

TABLE A

Actual Cost of An Oil Spill Cleanup
By Number of Barrels and Type of Oil

All Spills

Barrels Spilled	Number of Cases	Low Cost	High Cost	Average
0 to 1	17	$39	$10,320	$2,042
1.1 to 10	12	$500	$100,000	$12,961
11 to 100	10	$558	$300,000	$52,626
101 to 1000	10	$5,920	$5,000,000	$1,085,421
1001 to 91000	19	$126,807	$35,000,000	$7,823,165

Heavy Oil

Barrels Spilled	Number of Cases	Low Cost	High Cost	Average
0 to 1	14	$39	$10,320	$2,397
1.1 to 10	6	$500	$100,000	$5,701
11 to 100	9	$558	$300,000	$53,540
101 to 1000	8	$5,920	$5,000,000	$685,777
1001 to 91000	13	$320,880	$35,000,000	$8,715,443

Light Oil

Barrels Spilled	Number of Cases	Low Cost	High Cost	Average
0 to 1	3	$100	$635	$389
1.1 to 10	6	$2,381	$100,000	$20,221
11 to 100	1	Only one case		$44,400
101 to 1000	2	$368,000	$5,000,000	$2,684,000
1001 to 91000	6	$126,807	$19,080,000	$5,889,896

Department of Transportation

United States Coast Guard

August 18, 1992

From: Commandant
To: Commander, Eleventh Coast Guard District (d)

Subj: STATE COORDINATION FOR OPA 90 IMPLEMENTATION

1. The Oil Pollution Act of 1990 (OPA 90) has been with us for over two years now. The Act materially altered the nature of the relationship between the Coast Guard and the states in the marine environmental protection (MEP) arena. States now have the opportunity for a more active role in pollution prevention, response, access to the Oil Spill Liability Trust Fund (the Fund), and freedom to regulate in areas historically reserved to federal agencies. As the Coast Guard works toward implementing the provisions of this Act, we see many states also developing their own pollution prevention and response regimes, as well as promulgating related legislation and regulations. With the states so actively involved in pollution initiatives, it becomes imperative that the Coast Guard and states coordinate our activities to ensure a maximum measure of consistency.

2. As I've discussed with you in the past, successful implementation of OPA 90 requires a close working relationship with each state. Where no relationship now exists, I want you to initiate one. Where one does exist, I want you to foster it and have it evolve into a mutual alliance for managing the full range of MEP issues. I believe that you, as District Commander, with the assistance of the Regional Response Teams (RRT), are best situated to take the lead in

establishing and nurturing this relationship. My plan is to have each district commander serve as the focal point for Coast Guard/state coordination, with input received from their captains of the ports, Headquarters, the National Pollution Funds Center (NPFC), and the National Strike Force Coordination Center (NSFCC).

3. A key result I want from this coordination effort is a single comprehensive memorandum of agreement (MCA) between you and each state (and/or Territory or Possession, etc.) in your District. I envision one MOA with each state, so in instances where state boundaries are part of two or more districts, it will be important to work together to develop a multi-district/state MOA. When an MOA incorporates more than one district, I want each district commander involved to be signatory to it. The MOA should set forth the Coast Guard/state relationship in MEP activities including planning, prevention, response, and state access to the fund. Commandant (G-M) and the NPFC will provide guidance and assistance in developing these agreements. A concept paper defining the Coast Guard's state coordination initiative is being developed and should be available by 1 October 1992. This concept paper will include a conceptual MOA to be used as a basis for your negotiations with each state in your district.

4. Your initial contact with the governor should seek designation of a single point of contact within the state government, to the extent possible, who can represent the governor and oversee developing the comprehensive agreement described above. Where it may not be possible, or not to our advantage to have a single point of contact, we will likely have to negotiate the MOA with multiple state agencies. The designee(s) should be able to direct our staff elements to their appropriate state counterparts. Ideally, we would

propose this designee be the state representative to the RRT, and I would expect you to offer your RRT representative, with the assistance of the newly formed district response advisory teams, as your point of contact.

5. Enclosure (1) is a letter that I suggest you use to make the initial contact with the governors. I would like you to stay with this text as much as possible so that the letters remain consistent throughout the districts. The bracketed text in the third paragraph may be omitted as appropriate. If you are aware of any of the governors having already designated a point of contact for state coordination, you should use the wording of option (a) of paragraph five of enclosure (1) when sending the letter. If you are not aware of the governor's designation of a point of contact, option (b) should be used.

6. Commander Bruce Russell, Chief of the Environmental Coordination Branch (G-MEP-3) will be my primary point of contact. He may be reached at (202) 267-0149. Captain Richard Wright, Chief of the Policy and Coordination Division, National Pollution Funds Center (CP) will also be coordinating our relationship with the states. He may be reached at (703) 235-4712.

/s/ J.W. Kime

J. W. KIME
Admiral, U.S. Coast Guard
COMMANDANT

Encl: (1) Sample Letter to State Governor

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

Honorable John C. Coughenour

NO. C95-1096C

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington, et al.,
Defendants,

and

THE WASHINGTON ENVIRONMENTAL COUNCIL;
THE NATURAL RESOURCES DEFENSE COUNCIL,
Intervenors.

DECLARATION OF JEFFREY NEEDLE
IN REPLY TO INTERVENORS'
MOTION FOR SUMMARY JUDGMENT

JEFFREY L. NEEDLE hereby declares, under penalty of perjury under the laws of the State of Washington, as follows:

1. That I am the attorney of record for the Intervenors in the above-entitled cause. That I am competent to testify to the matters contained herein and do so upon personal knowledge.

2. That attached hereto are true and correct copies of the following documents:

A. Safer Ships, Cleaner Seas, Lord Donaldson's Report

B. Standards of Training, Certification and Watchkeeping for Seafares (STCW), 1978.

C. IMO - Subcommittee on Standards of Training and Watchkeeping

D. IMO - International Regulations for Preventing Collisions At Sea.

E. A Summary of IMO Conventions, January, 1995.

F. IMO - Status of International Conventions relating to Marine pollution.

G. Implementation of IMO instructions - MARPOL.

H. News articles.

I. McCurdy, Gregg, L., Comment: An overview of OPA 1990 and its Relationship to Other Laws, *5 U.S.F. Mar. Law Journal 423* (1993).

J. Jarashow, Richard L., The New Regime for Oil Spill Liability in the United, *18 Canada - U.S. L.J. 299* (1992)

Dated this 15th day of July, 1996 at Seattle, Washington.

/s/ Jeffrey Needle
Jeffrey Needle
Attorney for Intervenors

SAFER SHIPS, CLEANER SEAS

REPORT OF LORD DONALDSON'S INQUIRY INTO THE PREVENTION OF POLLUTION FROM MERCHANT SHIPPING

Presented to Parliament by the Secretary of State for Transport by Command of Her Majesty
May 1994
CM 2560 LONDON: HMSO £38 net

* * * *

Chapter 6

Flag State Control

Introduction

6.1 In an ideal world **Flag States,** whose flags are worn by the world's shipping, would lay down, and enforce upon their own shipowners, standards of design, maintenance and operation which would ensure a very high standard of safety at sea. **Coastal States,** along whose coasts shipping passes, and **Port States,** at whose ports or anchorages shipping calls, would have no cause to concern themselves with the maintenance of such standards.

6.2 The present system of Flag State Control falls well short of this ideal. At any one time the fleet of any Flag State will be scattered throughout the world. No Flag State has the resources to police its fleet on a continuous and all-embracing basis. The most that it can do is to insist upon periodic surveys and to undertake *ad hoc* inspection if it learns that a ship has suffered a casualty or, for some other reason such as a Port State Control inspection, it suspects that its ship no longer complies with internationally agreed standards. Good

shipowners will maintain the seaworthiness of their ships regardless of whether a Flag State periodical survey is imminent. Regrettably, bad shipowners regard the imminence of such a survey as the only reason for spending money on maintenance or repairs and then only if satisfied that the survey will be thorough.

6.3 In this situation, even if Flag States were to comply to the full with their responsibilities, Coastal and Port States would still have a part to play. They would, in their own interests, be concerned to detect the few unseaworthy ships which had escaped the Flag State net. Their role would be to supplement and support Flag State Control, but not to substitute for it.

6.4 Regrettably it is beyond argument that not all Flag States live up to their responsibilities. Figures for deficiencies and detentions revealed by Port State Control inspections[1] show that, for example, of 61 Indian registered ships inspected over one in four were so seriously deficient that they had to be detained in port. Over 85 per cent of the inspections of Indian registered ships uncovered deficiencies. India, although a striking example, is by no means alone and a number of other Flag States also have a poor record. Port States, in their own vital interests, have thus been obliged to take on a much wider, more onerous and expensive task, namely picking up the pieces where Flag States have failed. Whilst we agree that Port State Control is no substitute for effective Flag State Control, we believe that there is a strong case for strengthening Port State Control, at least for the next few years, both as a means of drawing attention to the shortcomings of Flag States and of putting pressure on them

---

[1] Under the Paris Memorandum of Understanding (which we describe in Chapter 11). The figures mentioned are in the Memorandum of Understanding on Port State Control Annual Report 1992.

to improve their performance. Our ideas on improving Port State Control are discussed in Chapter 11.

6.5 In 1992 6,500 different foreign flag vessels called at UK ports. Excluding short-sea ferries and fishing vessels, there were 82,600 arrivals of which 61,000, or 74 per cent, were foreign flagged. These figures demonstrate two interrelated facts of crucial importance.

6.6 First, that the proportion of the world's shipping which still flies the Red Ensign and which is thus directly or indirectly subject to UK Flag State Control has steadily declined. In 1970 the UK registered merchant fleet was the third largest in the world, amounting to over 11 per cent of the world's gross tonnage. By 1979, despite UK tonnage remaining at a similar level to that in 1970, this had fallen to under 7 per cent of because the overall increase in world tonnage. Since then the tonnage of the UK fleet has declined significantly as world tonnage has increased, to the extent that by June 1992 the tonnage of UK registered merchant vessels was less than a quarter of that in 1979 and amounted to just 1.35 per cent of the total[2].

6.7 Second, the UK, as a major trading nation wholly surrounded by sea, is heavily dependent upon foreign flagged shipping for the movement of its goods. The opening of the Channel Tunnel in 1994 will not greatly affect that dependency. If, due to inadequate Flag State Control, many of those ships are substandard, the UK is peculiarly at risk of its coastline being polluted. It follows that the UK has, of necessity, to take on the role of a major Port State Control authority. Indeed, given the decline in the size of the UK

---

[2] Figures derived from Lloyd's Register Statistical Tables June 1992 – ISSN 0076 0234.

fleet, for the time being this must be its primary task (see Chapter 11).

6.8 A State which confers its nationality upon a ship, and thus authorises it to fly its flag, has an unfettered right to subject that ship to its laws. This enables it to impose and maintain standards of design, construction, equipment, maintenance and operation. Whilst there is no upper limit to these standards, there are lower limits. These stem from the various international Conventions to which Flag States are parties, such as the SOLAS, MARPOL 73/78 and Load Line Conventions, under which Flag States are required to establish that ships flying their flags comply with the provisions of those Conventions and to issue the necessary certificates of compliance. The Conventions under which certificates are issued require that these certificates should be accepted in good faith by other States party to those Conventions – for example, Regulation 17 of Chapter I of SOLAS states that:

> "Certificates issued under the authority of a Contracting Government shall be accepted by the other Contracting Governments for all purposes covered by the present Convention. They shall be regarded by the other Contracting Governments as having the same force as certificates issued by them."

The Certificates required under the main Conventions are detailed in Appendix D.

6.9 Economic and competitive considerations effectively prevent Flag States from imposing standards which are higher than those internationally agreed and any improvement in standards is thus only achievable by international agreement. The machinery for such agreement is provided by the

International Maritime Organization (IMO). This is not to say that some, if all too few, shipowners do not operate to higher standards out of pride or enlightened self-interest, but they cannot be required to do so through the mechanism of Flag State Control.

6.10 Notwithstanding the fact that these international agreements already cover a wide range of matters, there is considerable room for extending their scope. This is particularly true in relation to ship management and the human aspects of seafaring. There is also a need to upgrade the existing standards. We commend the efforts made by the UK Government to persuade IMO to take steps to achieve these improvements in the scope and strictness of internationally agreed safety standards. These efforts should be continued and intensified.

6.11 States which are party to the various Conventions undertake to implement them fully by domestic legislation and all or most do so. The United Kingdom has done so by numerous regulations made under enabling statutes. This is an effective method of implementation. But legislation is one thing. Enforcement of that legislation is quite another and it is in this respect that many Flag States are wanting. Unfortunately there are at present no effective sanctions which can be deployed against them.

Enforcement of Flag State Control

6.12 It is for Flag States individually to decide how to give effect to their international obligations. In some cases the international Conventions specify precise requirements. SOLAS, for example, requires minimum pressures at fire hydrants and MARPOL includes precise formulae for the calculation of positions of ballast tanks. But in other cases, the Conventions merely specify that equipment must be

"approved" by the Flag State or be "to the satisfaction of the Flag State". Sometimes such lack of precision is necessary for technical reasons or to allow for innovation. Regrettably in others it is merely designed to conceal differences of view between the members of IMO.

6.13 Methods of enforcement vary. All, at least in theory, involve initial and thereafter periodical surveys. These surveys may be undertaken by officials of the Flag State or by private organisations, such as classification societies, acting on its behalf. There is no particular merit in the adoption of one approach rather than the other or indeed in the adoption of a mixture of the two, provided always that the approach is effective. It is impossible to over-emphasise the importance of this proviso.

Flag State advantages

6.14 A Flag State has considerable advantages over Port States in controlling the safety of its vessels. It can and should maintain records of the construction details of the ship, subsequent modifications which it has had to approve and details of surveys leading to the issue of renewal of certificates. A Flag State has an unimpeded right of access to any ship on its register and can charge the shipowner for surveys and the issue of the necessary certificates.

The UK method of enforcement - the Marine Safety Agency (MSA)

6.15 Responsibility for carrying out the UK's Flag State duties falls mainly upon the Marine Safety Agency (MSA) which came into being on 1 April 1994. It is an executive agency of the Department of Transport. Until 31 March 1994 it was the Surveyor General's Organisation (SGO) which was part of the Marine Directorate of the Department of Transport.

6.16 MSA aims to develop, promote and enforce high standards of marine safety and prevention of pollution from ships. Its tasks include developing and monitoring safety and pollution prevention policies and standards; representing the Department of Transport's interests in these areas nationally and internationally; carrying out inspections of UK and foreign registered ships and enforcing standards by application of relevant sanctions; providing survey and certification services to the UK shipping industry; and setting the standards and monitoring the training of, and providing examination and certification services to UK seafarers. These tasks include not only Flag State functions but also Port State Control responsibilities which are discussed in Chapter 11 below. Individual surveyors are generally involved both in Flag State and other survey and certification work **and** in Port State Control inspections. The work and organisation of MSA are described more fully in paragraphs 6.35 - 6.46 below and in Appendix C.

6.17 It is for the Flag State to ensure that its maritime administration is capable of carrying out its responsibilities. The international standards cover a range of technical matters including design and construction, safety equipment, radio communications, safety of navigation, the carriage of dangerous goods and pollution prevention. Although the Flag State retains overall responsibility for ensuring that the international standards are properly implemented, it may delegate some or all of its functions to other organisations such as classification societies. The level of delegation differs between administrations. MSA delegates a number of functions, such as surveys of ships for the issue of Safety Construction and Load Line certificates, to five classification societies, namely Lloyd's Register of Shipping, The American Bureau of Shipping, Det Norske Veritas, Bureau Veritas and Germanischer Lloyd.

Present weaknesses of Flag State Control

6.18 When the international Conventions were originally drafted, most of the world's merchant fleet was owned by, and flew the flags of, the world's major maritime and trading powers. These States had already established survey and inspection of their ships as a matter of public policy aimed at protecting the safety of crews and passengers. While the setting of such standards was not immune from commercial pressures from shipowning interests, their enforcement was not subject to such pressures. This was presumably in reflection of the fact that in the UK, for example, there had been a long history of regulation through the Board of Trade and the fact that most UK trade was carried in UK ships which were subject to the same standards and accordingly competed fairly with one another. States had little or no direct financial interest in shipping and could apply and enforce standards in the interests of public policy without feeling any pressure to maintain or enhance their merchant fleets.

6.19 All that has changed. Today few States regard it as consistent with their national status and dignity to be without a register of national shipping of as large a size as possible. Some also regard such a register as a useful source of income. In seeking to achieve this aim, some see no need to limit eligibility to ships whose owners or operators have any connection with the State. They maintain what are called "open" registers. A few such States are landlocked and have no connection with the sea. Rather more include ships which are never likely to call at a national port. Perhaps in recognition of this fact one of the largest and, it has to be said, one of the most efficient, Liberia, maintains its register and discharges its responsibilities from an office in the USA. Relatively few Liberian ships ever call at Monrovia, their usual port of registry. Another example is Vanuatu, which has

few foreign exports and whose register is run from the USA and London.

6.20 All this might be unobjectionable if, despite the very considerable difficulties in enforcing standards on ships (and shipowners) which have no real connection with the State whose flag the ships fly, agreed international standards were universally enforced. However they are not. The vice of "open" registers is twofold. First, in practice they lead to varying standards of safety. This is easily demonstrated by **Figure 6.i** (overleaf) which shows the incidence of total losses by flag. Second, the existence of "open" registers and the consequent ease with which ships can be transferred to a different register and flag has led to some shipowners shopping around for the registers which have the lowest standards of enforcement and which, in consequence, involve them in the least expense. This is positively encouraged by some of the Flag States concerned which have even been known to advertise competitive "prices" for their survey and certification work.

6.21 **Figure 6.i** is also highly significant as showing that the national fleets with the worst losses are almost all expanding.

Flags of convenience

6.22 This expression is always used in a derogatory sense, but it is not always applied to the same flags. The International Transport Workers Federation (ITF) describes any register which does not strictly limit entry to nationals of the Flag State as a flag of convenience. This may be a legitimate use of the term from the ITF's point of view, but it by no means follows that ships flying flags of convenience as so defined are substandard. Indeed in terms of that definition the whole of the Red Ensign group of flags would be characterised as flags of convenience, since the

qualifications for entry, although limited, are not as limited as defined by the ITF. For example the UK register is required by EC law to be, and is, open to vessels the majority of whose 64 shares are beneficially owned by British or EC citizens or corporations. Qualifications for other Red Ensign registers are set out at Appendix G.

6.23 A more relevant definition for present purposes is that adopted by MSA as "an open register where the Flag State does not have the capability of supervising the safety of its ships".

* * * *

6.24 We would expand this definition to include Flag States which, whilst they may have the capability of such supervision, do not in fact exercise it for reasons of economy or a perverted desire to be competitive. We would also delete the reference to "an open register" since it is not the "openness" of the register which constitutes the vice. It is quite possible, if unusual, for a State with an open register to maintain standards which are as high or higher than is the case where a State maintains a closed register.

6.25 Accordingly we would define a flag of convenience as "a register where the State does not have the capability of supervising the safety of its ships or does not do so effectively".

Improving Flag State performance

6.26 The objective must be to eliminate flags of convenience as so defined. Progress will undoubtedly be slow because of the difficulty in undertaking international negotiations based upon the proposition that some of the participants are failing to honour their existing obligations. But a start must be made and it is to the credit of IMO that it has set up a Sub-

Committee on Flag State Implementation. **We recommend that the UK Government gives the Sub-Committee its full support.**

6.27 The Sub-Committee and IMO itself are undoubtedly faced with a major problem. One of the purposes of IMO is to encourage the removal of discriminatory or unnecessary action by Governments affecting shipping engaged in international trade so as to promote the availability of shipping services to the world without discrimination. This is only achievable if all Flag States discharge their responsibilities to the full. If, as is the case at present, they do not do so, discrimination, if only in terms of Port State Control targeting, is inevitable. Furthermore, unless some major and rapid improvement can be achieved by simple persuasion, in our judgment further discrimination will have to be undertaken both in self defence by Port and Coastal States and by IMO in the general interest.

6.28 We earnestly hope that persuasion, backed by worldwide public opinion, will suffice but, if it does not, we consider that in the very near future IMO will have to consider two further initiatives. In the first IMO would publish, flag by flag, information provided by Port States on the extent to which defects are found in ships on inspection. This would bring pressure to bear not only in terms of national pride, but also commercially, because insurers, charterers and shippers could, should and, with a little urging, would take such a league table into account when considering contracting with owners of ships flying flags with a record of being substandard. In the second, which would only be necessary if the first failed to remedy the problem, Regulation 17 of Chapter I of SOLAS, and similar provisions in other Conventions, would be amended to remove the requirement to recognise certificates issued under the authority of a

Contracting Government if the record of the Government concerned was held by IMO, or by a Port State without dissent by IMO, to justify such a course. **We recommend that the UK Government in cooperation with other Port States should seek to carry this process forward on these lines.**

6.29 Quite apart from a general failure to supervise the compliance of their ships with internationally agreed standards, there is evidence that some Flag States are abusing their power to grant temporary dispensations. These are not used over a wide range of aspects but primarily in relation to manning certificates, for example in the case of a shortfall in manning due to illness of a crew member. We note with satisfaction that IMO's Maritime Safety Committee is considering what can be done to prevent unscrupulous Flag States abusing the system.

* * * *

Classification societies

7.27 As we mentioned briefly in Chapter 6, classification societies are international commercial organisations staffed by marine surveyors. Historically they came into existence to develop and monitor standards of design, construction and maintenance for the assistance of shipowners and underwriters. Shipowners needed technical guidance to ensure that their ships were seaworthy, and underwriters needed assurance that they were. Thus an underwriter who was asked to write a policy on hull and machinery would enquire whether, and might insist that, the ship was "classed" with a classification society. Being "in class" meant, and still means, that at the last periodical survey the society was satisfied not only that the ship then complied with its Rules and

Regulations, but that, barring accidents and subject to proper maintenance, it should so comply until the next such survey.

7.28 Classification society Rules and Regulations are separate from those developed by flag administrations to implement the relevant Conventions and as such they do not cover such matters as ship stability, life saving appliances and pollution prevention arrangements, as these are matters for the Flag State with which the ship is registered. However, as we saw in Chapter 6, a great many Flag States, including the UK, delegate a number of the statutory surveys for the issue of Convention certificates to the classification societies which undertake them in accordance with agreed procedures. We make a number of recommendations on this in Chapter 6.

The performance of classification societies

7.29 Ships are not necessarily, or even usually, in their home ports when the time comes for them to be subjected to a periodic survey and, between surveys, they may be damaged at any time or any place. It follows from this that if a classification society is to be able to perform its monitoring role, whether on behalf of the shipowner or of the Flag State, it needs to have the very considerable resources necessary to maintain a worldwide organisation. In recent years the number of classification societies has increased rapidly to 49. Inevitably many do not have the requisite resources or indeed expertise.

7.30 It was therefore no surprise to receive evidence of widespread dissatisfaction with the performance of some of these societies. It was in part with a view to addressing this problem that the International Association of Classification Societies (IACS) was formed. Full membership of IACS is limited to such societies as in its opinion have the necessary resources and expertise to fulfil their role. There are at

present 11 such members, together with two associate members who are on the way to full membership. IACS members survey over 90 per cent of the world's merchant shipping tonnage.

7.31 Individual societies make their own classification Rules and Regulations. IACS has taken the initiative with a view to harmonising standards. It has also produced guidance for owners and operators of bulk carriers identifying potential weaknesses and remedies and has introduced enhanced surveys for bulk carriers and tankers

7.32 IACS has developed a Quality System Certification Scheme (QSCS) which has become a mandatory requirement for members. The Scheme involves periodic auditing of members' internal quality systems to ensure that they are operating properly and that they conform with the IACS "Code of Ethics" and quality system requirements. Members whose systems pass the audit procedure are issued with a quality system certificate of conformity valid for three years. Renewal is subject to further audit. Members whose quality systems are not up to standard may have their certificates suspended if deficiencies are not rectified within a specified period.

7.33 IACS invited both IMO and underwriting organisations to participate in the QSCS. IMO agreed to take part but underwriters did not. We consider that the widest possible external involvement in monitoring and improving the Scheme is in the interests of safety and **we recommend that underwriters' organisations reconsider their position.**

7.34 As we mentioned briefly in Chapter 6 the Department of Transport also monitors the performance of the five classification societies which carry out work on its behalf. MSA has in place audit arrangements based on a

Memorandum setting out the relationship between it and the societies in respect of the survey and certification of ships. Each society is subject to audit on a two yearly cycle.

7.35 The existence of IACS and the initiatives which it has taken are clearly of great benefit in terms of safety at sea. This can be demonstrated from an analysis of the level of detentions of ships by UK Port State Control inspectors. Only one foreign ship in ten visiting UK ports is classed with a non-IACS member, yet 19 per cent of ships detained are so classed. Even if the record of ships classed with IACS members is not one which would justify any degree of complacency, the contrast is glaring.

7.36 Something further needs to be done if competitive pressures are not to drive out societies with good records and favour those which provide a cheaper but worse service. This is coming to be appreciated and the new IMO Sub-Committee on Flag State Implementation has prepared a draft Assembly Resolution containing guidelines for the authorisation of organisations acting on behalf of administrations. These guidelines, which were adopted by the Eighteenth Assembly in November 1993, are based only on qualitative criteria. This work is being echoed by the European Commission draft Directive on classification societies. However, unlike the Assembly Resolution, the draft EC Directive contains both quantitative and qualitative criteria to ensure that these organisations are professionally reliable and able to maintain proper control of compliance with safety and environmental protection standards on the vessels they classify.

7.37 **We support the EC's proposals and the UK Government's backing of them. We recommended that the UK Government should work through IMO to press for a review of the IMO guidelines and minimum standards for classification societies with a view to improving them as**

necessary and to developing, as a matter of urgency, detailed specifications on precise survey and certification functions delegated to such organisations. The UK Government should also work through IMO for swift implementation of minimum standards for all work delegated by Flag States to classification societies. Classification societies which do not meet these international standards should not be granted international recognition. A similar recommendation was made by the House of Lords Committee chaired by Lord Carver (see paragraph 1.28) and accepted by the UK Government in its response to the Committee's report.

* * * *

Training

8.18 Although the human element in incidents is very considerable, the chain of factors can be complex and remedies can be difficult to determine. P & I Club experience shows that maiden voyages are often times of high risk, presumably because of relatively untried equipment with which the operators are unfamiliar. The same is often noted after a refit. In some cases the best hope for reducing the chance of human error lies with properly designed operational procedures, good operational management and good working conditions. We believe that not enough attention is paid to familiarity with particular items of machinery and equipment and, most importantly, to instruction and practice in procedures for dealing with emergencies. Training can both reduce the risk of accident and lessen its effects by helping to ensure a successful human response to the unexpected.

8.19 Research by the Tavistock Institute of Human Relations for the Department of Transport's Marine Directorate[3] has highlighted the need for more emphasis on developing good judgment in training and on practical training at sea. Accident investigations place similar stress on these factors and on requiring all ships to observe at least the internationally recognised standards of training, operation and maintenance.

8.20 We heard evidence of inadequate training, both initially and as new equipment and methods are introduced. It was put to us that UK Masters would often find themselves carrying out tasks which, with a properly trained staff, they would not have to do themselves. These unwarranted additional duties can obviously worsen the problems of fatigue and stress in a lightly-manned ship.

8.21 In some people's minds training goes little further than achieving a grade in an examination after serving for so many years at sea. This is not enough: training is available from a wide range of sources to suit individual requirements and should be seen as a constant process of refreshing and adding to knowledge and capability. Colleges in a number of countries, including the UK, train to very high standards and on-board training by experts is also available, along with courses on particular pieces of equipment provided by the manufacturer.

8.22 Of course, good seamanship also has to be learnt at sea, but it is safer to practise responses to emergencies in the classroom. An excellent means of bringing a sense of realism into that work is through simulators on which people can exercise their skills and deal with emergencies in such areas as navigation, engineering and the handling of dangerous

---

[3] *The Human Element in Shipping Casualties*, Marine Directorate, Department of Transport, (HMSO 1991)—ISBN 0 11 551004 4.

cargoes. Generally, there is a need to ensure that all of those serving at sea have received basic craft, safety and survival training as well as the higher technical training required in order properly to carry out their job and to deal with emergencies. **We recommend that the Department of Transport should raise these points with UK owners, charterers and insurers, and seek discussions on them at IMO.**

8.23 We discuss the specific problems of training of UK crews in paragraph 8.58 onwards at the end of this chapter.

Convention on Standards of Training, Certification and Watchkeeping 1978 (STCW)

8.24 Existing international standards are set out in STCW, which was negotiated through IMO. Although conceived as a minimum requirement below which no Flag State should fall, the lack of clear definition of training standards means that STCW is often in effect the maximum level above which many States fail to rise. Due to this lack of a clearly defined standard, the quality of training abroad differs widely. These differences may well account for the wide variations in on-board technical competence which are apparent, for example, from Port State Control inspections.

* * * *

Weaknesses in the system

11.14 There are two obvious weaknesses in the system of control envisaged by the international Conventions. First it does not fully protect good shipowners from inspections at every port of call with the consequent inevitable, if often minor, disruption to the ship's routine when Port State Control officials board and require production of the relevant certificates. Second it does not adequately deal with

substandard ships. This is because the system of control provided in SOLAS and other Conventions is based upon the assumption that notification of deficiencies to the Flag State and, if they have not been fully remedied, to the authorities at the next port of call, will ensure that for the future the ship will meet the international standards. This is an entirely false assumption given the lamentable state of much Flag State Control and the fact that the next port of call may be in a State which has an equivocal attitude towards Port State Control or has inadequate resources to follow up the notification. Once a ship has been found to be substandard, she needs careful watching for the future. All ports at which she may thereafter call, and not just the next port, need to be alerted to this fact.

* * * *

The United States and "unlimited liability"

19.28 The United States has not ratified the Civil Liability or Fund Conventions and has established a separate domestic liability and compensation system under the Oil Pollution Act 1990 (OPA 90). Prior to its enactment, Federal maritime law preempted State law on marine limitation matters but OPA 90 allows the development of State liability and compensation laws for oil pollution. Ships operating to the United States therefore face varying State provisions as well as those of Federal statute.

19.29 Under OPA 90 the owner is strictly liable for oil pollution but is allowed to limit his liability to an amount based on the tonnage of his ship. The provisions of OPA 90 differ from those of the Conventions in that the limits for liability are significantly higher and that it is much easier to break the owner's right to limit his liability. Many observers consider that despite the references to limitation in most cases, owners involved in an oil spill in United States waters

effectively face unlimited liability. In addition to clean-up costs and economic loss, OPA 90 allows claims for non-economic environmental damage but the basis for such claims is not specified in the Act. Those who insure owners' third party liabilities are subject to direct action. It is this provision, together with the risk of unlimited liability, that has made insurers reluctant to provide the certificates of financial responsibility required under the terms of OPA 90.

19.30 Under OPA 90 claims which exceed the shipowner's limit can be made against a revolving Federal Fund of $1 billion financed by a tax on US oil. This Federal Fund, which has yet to be tested by a major incident, is intended to provide early compensation. It appears that the Federal Fund will initiate recourse action against shipowners to recover any payments it makes including breaking the owner's right to limit his liability. The owner is responsible for initiating and monitoring any clean-up operations following a spill and any failing by the owner in this respect can affect his right to limit his liability. The United States is unique in placing responsibility for the clean-up of pollution outside the ship on the owner. Responsibility for dealing with pollution from ships in UK waters is described in Chapter 21.

19.31 The main problem with the liability and compensation regime established under OPA 90 is that it creates great uncertainty for operators and insurers. The threat of unlimited liability already seems to have deterred some shipowners from operating to the United States and insurers levy additional premiums for ships intending to operate in US waters. The shipowner's liability is limited in practice by what he can pay before becoming bankrupt and insurers are understandably reluctant to accept responsibility for payments beyond the agreed cover. The best way for shipowners to protect their assets under the threat of unlimited liability may

be to create one ship companies, thus limiting their liability to the point at which bankruptcy occurs. This does not encourage responsible operators.

19.32 We reject arguments that the United Kingdom should adopt a liability and compensation regime similar to that operating in the United States. The regime established under OPA 90 is, as yet, untested. It has received no support internationally, even from those who have reservations about the 1992 Protocols. And there is no guarantee that the bad operators will be deterred from operating to the US. Instead, it is more likely that the better operated, larger fleets will be deterred because of the unreasonable level of risk. There is no doubt that OPA 90 has driven insurance costs up significantly and we believe that this money would be better spent on improving standards and on preventive measures. We also consider that it is undesirable to place the responsibility for the clean-up of pollution on the shipowner who is more unlikely to have the expertise of a national body such as the UK's Marine Pollution Control Unit,

Congress of the United States
Washington, DC 20515

September 28, 1993

Commandant J. William Kime
U.S. Coast Guard
2100 Second Street SW
Washington, DC 20593-0001

Dear Commandant Kime:

We are writing to express our grave concern at the U.S. Coast Guard's attempt to obstruct the implementation of Washington state's oil spill prevention laws. This objection to state standards for Canada-bound vessels transiting Washington state waters is both surprising and disappointing.

Arguably, the waters of Washington state constitute some of the most biologically productive and sensitive marine ecosystems in North America and potential threats to our resources from vessels traveling through our waters must be taken very seriously. Washington state serves as a model both in efforts and commitment to afford the highest degree of protection from environmentally destructive oil spills. Governor Mike Lowry has our strongest support for these efforts and we agree with his assertion that it is not within the best interests of the state, nor the resources of Puget Sound and the Washington coast, to delay implementation of any vessel traffic safety or spill prevention measures.

We are extremely concerned with the Coast Guard's threats to void state oil prevention standards for these Canada-bound vessels. In the Oil Pollution Act of 1990 Congress provided that state laws, requirements and jurisdiction would not be preempted by federal law. The U.S. Coast Guard

should not be obstructing the state's efforts to protect state waters.

While the Coast Guard contends the state's rules may imperil international agreements, the requirements of a limited number of vessels to file oil spill prevention plans need not jeopardize the Vessel Traffic Management Agreement between the United States and Canada or the internationally recognized vessel traffic management scheme in the Strait of Juan de Fuca. This system is mandatory on all vessels that traffic the Strait of Juan de Fuca and it is in the interest of both governments to maintain this important safety program. While we applaud the Coast Guard's efforts to seek agreements through the International Maritime Organization on measures very similar to those Washington state is implementing, we do not believe one process necessarily jeopardizes the other.

It is critical that we resolve this issue as quickly as possible to bring a comparable degree of safety to all vessels transiting U.S. waters, regardless of flag or destination. Previous oil spills have occurred in the area of the Strait of Juan de Fuca, and there are several major vessel incidents each year at the entrance to the Strait. In addition, we are faced with the realization that a major spill in Puget Sound would be an unprecedented disaster in U.S. waters.

We appreciate your personal efforts to cooperate with Washington state and Governor Lowry and to seek a resolution to this issue with Canadian authorities. We hope this issue can be laid to rest quickly and the highest standards of protection currently mandated by state and federal legislation be quickly implemented for the Washington coast and Puget Sound.

Sincerely,

/s/ Slade Gorton	/s/ Patty Murray
Slade Gorton U.S. Senator	Patty Murray U.S. Senator
/s/ Norm Dicks	/s/ Al Swift
Norm Dicks Member of Congress	Al Swift Member of Congress
/s/ Jolene Unsoeld	/s/ Jim McDermott
Jolene Unsoeld Member of Congress	Jim McDermott Member of Congress
/s/ Maria Cantwell	/s/ Jay Inslee
Maria Cantwell Member of Congress	Jay Inslee Member of Congress
/s/ Mike Kreidler	/s/ Jennifer Dunn
Mike Kreidler Member of Congress	Jennifer Dunn Member of Congress

cc: The Honorable Federico Pena, Secretary of Transportation
The Honorable Warren M. Christopher, Secretary of State
Governor Mike Lowry

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON

HONORABLE JOHN C. COUGHENOUR

Case No. C95-109C

THE INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS (INTERTANKO),
Plaintiff,

v.

MIKE LOWRY, Governor of the State of Washington, et al.,
Defendants.

THE WASHINGTON ENVIRONMENTAL COUNCIL, THE NATURAL RESOURCES DEFENSE COUNCIL, Inc., and OCEAN ADVOCATES, Inc.,
Intervenors.

AFFIDAVIT OF ARTHUR McKENZIE IN OPPOSITION TO PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT AND IN SUPPORT OF DEFENDANTS' AND INTERVENORS' MOTIONS FOR SUMMARY JUDGMENT

STATE OF NEW YORK)
) ss:
COUNTY OF NEW YORK)

Arthur McKenzie, being sworn, states:

1. I am the Director of the Tanker Advisory Center, Inc. and submit this affidavit in opposition to Plaintiffs'

Motion for Summary Judgment and in further support of the Motion for Summary Judgment of Defendant State of Washington and Intervenors Washington Environmental Council, Natural Resources Defense Council, and Ocean Advocates.

Qualifications

2. As set forth in my affidavit in support of Intervenors' Motion for Summary Judgment, I worked for over 40 years for Exxon Corporation on issues relating to tanker operations. I then founded and for over 15 years have directed the Tanker Advisory Center which provides advice to those wishing to charter tankers. One of the most important considerations in tanker chartering, if not the most important factor, is cost. Therefore, in my current capacity I must stay abreast of current data concerning tanker operation costs.

Intertanko's Cost Claims Are of No Consequence

3. Plaintiff Intertanko discusses in its Motion for Summary Judgment the costs it expects its members to incur in complying with the Washington State BAP rules. In particular it asserts that it will cost Intertanko members approximately $12,000 to prepare a pollution prevention plan and approximately $80,000 to install the automatic tow package. *See* Affidavit of Miles Kulukundis at p. 3, line 24; Affidavit of Richard Du Moulin at p. 5, ¶ 11. In addition Intertanko asserts that the costs of compliance will be "substantial," *id.*, but does not attempt to quantify them. These costs, however, are of no consequence to tanker operations. In comparison to other tanker operation costs, the costs of complying with the BAP rules, even assuming Intertanko's cost figures to be correct, are insignificant.

4. As described in detail below, the average annual costs for the larger tankers importing oil into Puget Sound

(which are most likely to represent the bulk of vessels) range between $13,600,000 and $19,000,000 for U.S. tankers (which are the majority of tankers calling at Puget Sound) and between $8,400,000 and $12,000,000 for non-U.S. flag tankers. Thus, even if the cost of the BAP rules were double Intertanko's claims and were $200,000, these costs would constitute between 1% and 2.4% of the tankers' *annual* total operating costs. Since in fact many of the BAP compliance costs would not be repeated each year (such as the $80,000 installation of the tow package), the actual impact would be far less - probably less than one percent.

5. On the basis of my experience with tanker operations and chartering and tanker costs, I can state with confidence that this increase in costs of less than one to two percent is far less than the average variability of costs incurred by a tanker. In short, the incremental costs imposed by the Washington BAP rules are too small in relation to other tanker operation costs to make an operative difference. They certainly would not make a significant difference or hinder otherwise permissible tanker activity.

Any Incremental Costs Are Likely to be Offset by Reduced Pollution Costs

6. Intertanko's costs argument looks only to the increased immediate outlay required by the BAP rules. It does not examine the likely reduced outlays to respond to oil spills to determine a net economic impact. While it is impossible to precisely quantify the reduction in spills the BAP rules would bring about, it is my opinion that the reduction would be significant. Given that virtually any oil spill can cause the discharger to incur response costs of several hundred to many millions of dollars, the prevention of even one small spill would reduce the net economic impact of these rules to the tanker industry. For this reason as well, Intertanko's

arguments that the cost of complying with the BAP rules constitute a hindrance to free commerce is meritless.

Calculation of Average Annual Tanker Costs

7. As noted above, the annual costs for a tanker importing oil in Puget Sound range between $8.4 and 19 million. These figures are set forth in Exhibit A and explained below.

8. Costs for tankers will depend on whether it is a U.S. flag or foreign flag tanker and on the age of the tanker. Generally, tankers constructed in the United States cost more than tankers constructed elsewhere due to much lower productivity. Similarly, older tankers, termed "second hand tankers" generally incur higher operating costs but are already more fully depreciated. Thus, the analysis below provides figures for each category of cost for U.S. and non-U.S. flag tankers and for second hand new tankers. *See* Exhibits A and B, which are charts I prepared.

9. The costs incurred by a tanker can be grouped into several categories: capital cost, operating expenses, and voyage costs consisting of fuel costs and port charges. It is on the basis of these costs, among other things, that tanker companies can set charter rates.

10. First, the *capital costs* represent the original building or purchase cost of the tanker spread out over the life of the tanker. Intertanko calculates these figures assuming a 25 year tanker life and a discount rate (the "price of money" or the interest that money could earn if not directed to the tanker) of 10%. *See* Intertanko Monthly Market Report 1 (May 1, 1996) (Attached as Exhibit C). For purposes of my analysis, I have used the figures for "Suezmax" tankers which include the 125,000 dwt maximum size permitted into Puget Sound.

11. According to Intertanko's Monthly Market Report, a new 125,000 dwt tanker built outside the United States will cost approximately $54 million and has a daily capital cost of approximately $20,000. Similarly, an older 125,000 dwt tanker would be worth approximately $6.5 million with a daily capital cost of approximately $4,000.

12. Second, tankers also have *daily operating expenses*. These expenses include the cost of the crew, including salaries, vacation pay, medical insurance and food; standard ship maintenance; ship stores such as paint, lubricating oil, and rope; insurance on the ship itself (on the "hull") and protection and indemnity insurance relating to injuries that the ship may cause (including oil spill damages); and the ship's shoreside administration.

13. According to Intertanko, operating costs for tankers in the 125,000 dwt range are approximately $11,000/day for older tankers and $9,000/day for new tankers. *See* Intertanko Monthly Market Report (Exhibit C). Newer tankers are generally better designed and require a smaller crew and less ongoing maintenance and for that reason the operating costs of these ships are lower than the equivalent costs for older tankers.

14. Third, a tanker uses fuel and thus incurs fuel costs. These costs vary widely with the ship. Steam turbine powered ships use far more high viscosity fuel than motor tankers and newer ships with more efficient engines and hulls use less fuel than older ships. Attached as Exhibit D is a chart I prepared based on *The Tanker Register 1996* by Clarkson Research Studies in London showing the average fuel consumption of various tankers of the size permitted to enter Puget Sound. Depending on the tanker, the ship may consume anywhere between 40 and 120 tons of fuel oil per day.

15. The cost per trip of fuel can be calculated by determining the round trip voyage distance (in nautical miles), dividing that by the ship's speed (in knots) and by 24 to determine the number of days of the voyage, and multiplying that by the daily at-sea fuel consumption. The fuel used by tankers is generally high viscosity fuel which during the last few months has cost approximately $100/ton around the world.

16. In determining in-port fuel costs, which reflect the time the ship is moving more slowly near the dock and when powering the cargo pumps and other machinery when at berth, I have followed industry practice and assumed that in port fuel consumption as one half of the at sea consumption.

17. Finally, a tanker incurs *port charges*. These charges primarily include the cost of pilotage and tug boats. At some ports around the world, fees are levied on ships using the port, although these fees are not charged in Puget Sound or Valdez. In the Puget Sound area, the pilot fees are generally in the $5,000 - $10,000 range; the tugs may cost approximately $40,000. *See* the chart I prepared based on Intertanko's *Disbursements for Tankers 1993* (attached as Exhibit E).

18. Most tankers importing oil through Puget Sound are U.S. flag tankers carrying oil from Alaska. Only a modest amount of oil comes from foreign sources such as Indonesia. The costs for U.S. Flag tankers are different from the Intertanko figures which are based solely on non-U.S. flag vessels. As mentioned above, capital costs for U.S. flag tankers are between 50% and 100% higher; for purposes of my analysis I have assume the costs are only 50% higher. Thus, capital costs for new U.S. flag tankers would be approximately $30,000 per day and for second hand tankers would be approximately $6,000 per day.

19. Similarly, the operating costs for U.S. flag tankers are higher due to higher wage rates; on average these costs are at least 25% higher than the Intertanko figures. Thus, daily operating costs for U.S. flag vessels would be approximately $11,250 for new tankers and $13,750 for older ones. Voyage costs for U.S. flag and non-U.S. flag tankers will be approximately the same.

Calculation of Total Annual Costs

20. A tanker carrying oil into Puget Sound will incur all the costs outlined above. (A chart setting out these costs is attached as Exhibit A). As noted, most oil imported into Puget Sound comes from Alaska. Most likely, the bulk of this is carried in the largest possible tankers - those of approximately 125,000 dwt (the Puget Sound maximum). The round trip from Valdez, Alaska to Anacortes, Washington is 2,402 nautical miles, based on the *New Worldwide Tanker Nominal Freight Scale applying to the carriage of oil on bulk,* (Code name "Worldscale") (January 1, 1992). *See* Exhibit E. A U.S. flag tanker capable of cruising at 15 knots would require 6.7 days for the round-trip passage. It would also require 4 days in port for a total of 10.7 days per round trip. Thus, on each trip, the tanker would incur capital and operating costs of approximately $211,000 (second hand tankers) to $441,000 (new tankers).

21. In addition, the tanker would incur at-sea fuel charges for the 6.7 days of sea transit of $81,000 (assuming an old steam turbin tanker using 121 tons/day) to $30,000 (assuming a new motor tanker consuming 45 tons/day). The tanker would also incur in-port fuel charges for approximately 4 days of approximately $24,000 for old tankers and $8,800 for new tankers (assuming as noted above that in port consumption is one half of at sea consumption).

22. Finally, this tanker carrying oil from Valdez to Puget sound would incur port charges of approximately $50,000 in each of Valdez and Anacortes.

23. Thus, the total voyage costs for U.S. flag tankers carrying oil from Alaska to Puget Sound are approximately $579,800 for new tankers and $416,000 for second hand tankers. Since these tankers work approximately 350 days per year, they can make 32.7 trips (350/10.7) per year. *The total annual operating costs, therefore, amount to $18,959,000 for new U.S. flag tankers and $13,605,000 for second hand U.S. flag tankers.*

24. A similar analysis can be performed for non-U.S. flag tankers importing oil from abroad. A frequent oil exporting port is Arjuna, Indonesia. The round trip voyage from Arjuna, Indonesia to Anacortes, Washington is approximately 14,716 nautical miles. Assuming the tanker travels at 14 knots, the round trip voyage would last 48 days, with 44 days at sea and 4 in port.

25. For a new non-U.S. flag tanker with daily capital and operating costs of approximately $29,000, this results in voyage costs of $1,392,000. For an older tanker with daily capital and operating costs of approximately $15,000, this voyage would cost $720,000.

26. In addition, a new tanker would likely consume approximately 42 tons/day of fuel resulting in at sea fuel charges of $184,000 and in port fuel charges of $8,400. An older tanker consuming 80 tons/day would incur at sea fuel costs of $352,000 and in port fuel costs of $16,000. *See* Exhibit A. Finally, the tanker would incur port charges of $10,200 in Arjuna and $50,000 in Anacortes. Thus the total voyage cost would be $1,644,600 for a new foreign flag tanker and $1,148,200 for a second hand foreign flag tanker.

27. Since the trip from Arjuna is longer, these tankers can make fewer trips per year. Again assuming the work 350 days/year, these tankers could make 7.3 trips per year. Thus, *the total annual operating costs for foreign flag tankers are approximately $12,005,000 for new tankers and $8,380,000 for second hand tankers.*

28. Thus, given total annual operating costs of between $13.6 million and $19 million for U.S. flag tankers and between $8.4 million and $12 million for foreign flag tankers, the potential incremental outlay required by the BAP rules - not including the benefit to be gained from reduced oil spill response costs - would be only 1-1.5% for U.S. flag tankers and 1.5-2.4% for foreign flag tankers. Given the total costs of tanker operations and the benefits of the BAP rules, these costs are clearly not enough to change operational practices or lose potential charters.

Conclusion

29. For the reasons stated above, I believe that the Washington State BAP Rules are reasonable and effective measures which are not inconsistent with or in conflict with other existing tanker operation standards, will help prevent oil spills and associated pollution, and will not impose an unreasonable burden on tanker operations. The Rules are, in short, the "best available protection" and should be upheld.

/s/ Arthur McKenzie
ARTHUR McKENZIE

Sworn to before me this 27th Day of June, 1996

/s/ Stella Li Li Liang
Stella Li LI Liang
Notary Public, State of New York
No. 41-4793392
Qualified in Nassau County
Commission Expires October 31, 1997